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Temperament and Child Maltreatment: A Closer Look at the Interactions Among Mother and Child Temperament, Stress and Coping, Emotional and Behavioral Regulation, and Child Maltreatment Potential

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TEMPERAMENT AND CHILD MALTREATMENT:

A CLOSER LOOK AT THE INTERACTIONS AMONG MOTHER AND CHILD TEMPERAMENT, STRESS AND COPING, EMOTIONAL AND BEHAVIORAL REGULATION, AND CHILD MALTREATMENT POTENTIAL

by

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ABSTRACT

Several theoretical risk models were proposed previously regarding the prediction of child maltreatment. Although child maltreatment was predicted individually in these models by such variables as parent temperament, emotional and behavioral regulation, stress, coping, and child temperament, these variables were not yet examined collectively. As such, a new transactional theory was proposed for the current study. As part of this study, a national community sample of 158 culturally diverse mothers of young children who were between the ages of 1½- to 5-years rated their own temperament, emotional and behavioral regulation abilities, parenting stress, daily hassles, and coping behaviors as well as their young children's temperament. Correlational analyses demonstrated many significant relationships among the variables of interest. In addition, hierarchical regression analyses suggested that several parent (i.e., mother mood quality, mother flexibility/rigidity, emotion dysregulation, parenting stress, cumulated severity of stress, and emotion-focused coping) and child characteristics (i.e., young child mood quality) added unique incremental variance to the prediction of child maltreatment potential. Finally, mediation analyses indicated that mothers' emotion dysregulation mediated the relationship between mothers' flexibility/rigidity and child maltreatment potential. Overall, this study contributed information regarding the importance of emotion dysregulation as a mechanism through which difficult mother temperament may be related to increased child maltreatment potential. Accordingly, these findings suggested that emotion regulation skills may serve as a potential point of intervention for mothers who are at increased risk for child maltreatment due to difficult temperament characteristics.

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CHAPTER ONE: INTRODUCTION

Over the past several decades, many theoretical risk models emerged in an attempt to predict child maltreatment potential. Not surprisingly, research suggested that child maltreatment could not be predicted by any single factor or variable (MacKenzie, Kotch, & Lee, 2011). Instead, child maltreatment was better predicted by a multitude of risk factors and from a number of pathways. Nonetheless, two major types of theories (i.e., cumulative risk theories and transactional theories) gained prominence in this research literature. With regard to both of these types of theories, many factors were studied. For example, previous research indicated that children with emotional and behavioral difficulties (Sullivan & Knutson, 2000; Turner, Vanderminden, Finkelhor, Hamby, & Shattuck, 2011) were more likely to experience maltreatment than their typically developing peers. Similarly, children with difficult temperaments were exposed to more maltreatment, although far less research examined this risk factor (Casanueva, Goldman-Fraser, Ringeisen, Lederman, Katz, & Osofsky, 2010). Characteristics related to parents' difficult temperaments (Latzman, Elkovitch, & Clark, 2009; Stith, Liu, Davies, Boykin, Alder, Harris, Som, McPherson, & Dees, 2009) and emotion regulation abilities (Frodi & Lamb, 1980) also predicted child maltreatment potential. Finally, high levels of parenting stress, environmental stress (e.g., Black, Heyman, & Slep, 2001), and poor coping (Rodriguez, 2010) all demonstrated relationships with child maltreatment potential.

Despite documentation of these relationships in the context of the aforementioned theories, variables such as these were not examined collectively, suggesting the need for the further development and examination of a comprehensive model that could foster prediction of

child maltreatment potential. As a result, the current study aimed to identify those parent and child variables that collectively could provide optimal prediction of child maltreatment potential.

Major Theories About Child Maltreatment

As already noted, there were two major types of theories that were accepted widely as good predictors of child maltreatment potential. Essentially, the cumulative risk theory of child maltreatment held that the potential for child maltreatment grew as individuals experienced increasing numbers of risk factors. In other words, this type of model was concerned with the total number of risk factors that were present in a family, rather than the interactions among the specific factors or the severity of the risk factors. Begle, Dumas, and Hanson (2010) suggested that the cumulative risk theory held greater predictive value than transactional theories (e.g., Belsky's developmental ecological theory of child maltreatment; to be described later) for child maltreatment potential. Nonetheless, transactional theories still were accepted widely and consequently were important to consider.

Stemming from Bronfenbrenner's (1977, 1979) ecological theory of human development, several researchers described transactional or developmental ecological theories of child maltreatment. For example, Sameroff and Fiese (2000) suggested that child maltreatment resulted from interactions among parent characteristics, child characteristics, family functioning, and environmental stressors. Cicchetti and Rizley (1981) described how environmental variables, caregiver variables, and child variables acted upon each other reciprocally, and they emphasized how transactions among these risk factors may best predict child maltreatment. In addition, Belsky (1980, 1993) proposed that the etiology of child maltreatment was transactional and resulted from different levels of risk. In particular, Belsky (1993) described this transactional nature in the developmental ecological theory of child maltreatment, which suggested that child

maltreatment was predicted by the developmental context (i.e., parent characteristics and child characteristics), the immediate interactional context (i.e., parenting behavior, the parent-child relationship), and the broader context (i.e., environmental characteristics of the community and culture). The developmental ecological theory of child maltreatment also encompassed "a pathological syndrome of family interaction" (Green, Gaines, & Sandgrund, 1974, p. 882), which resulted in child maltreatment (Gaines, Sandgrund, Green, & Power, 1978).

Despite the wealth of research concerning the prediction of child maltreatment, there still was unexplained variance in the prediction of child maltreatment potential, suggesting that the existing predictive models were incomplete. The existing transactional theories needed to be enhanced so that child maltreatment potential could be predicted more accurately. For example, few mediators were examined in the relationships among parent characteristics, child characteristics, environmental characteristics, and child maltreatment. As such, this study sought to examine the interactions and transactions among child temperament, parent temperament, parent emotional and behavioral regulation, parenting and environment stress, and coping strategies in an effort to better predict child maltreatment potential in parents of young children.

Characteristics of Child Maltreatment

Maltreatment Statistics

In 2010, approximately 5.9 million children in the United States were referred to Child Protective Services (CPS) as victims of alleged maltreatment (U.S. Department of Health and Human Services, 2011). Of these referrals, CPS identified an estimated 695,000 children who were unique victims of some form of maltreatment (e.g., neglect, physical abuse, sexual abuse, psychological abuse). Although only a small percentage of children referred to CPS as victims of maltreatment allegations actually were indicated as victims of maltreatment, there were still large

numbers of children who were subjected to harsh parenting practices and who lived in families with high child maltreatment potential. For example, estimates of anonymous reports suggested that the actual prevalence of physical abuse could be more than five to eleven times higher than estimates provided by the government (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998).

Nonetheless, based on available 2010 estimates, maltreatment was spread fairly evenly across the sexes, with boys accounting for 48.5% and girls accounting for 51.2% of victims. After neglect (which accounted for 78.3% of victims), physical abuse was the most common type of child maltreatment in 2010, accounting for 17.6% of victims. In fact, this trend was evident over the past several years (U.S. Department of Health and Human Services, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009). Further, sexual abuse accounted for 9.2% of victims, and psychological maltreatment accounted for 8.1% of victims in 2010 (U.S. Department of Health and Human Services, 2011). Given these statistics, it was clear that rates of child maltreatment were higher than any health service provider would like to see.

Maltreatment by Different Perpetrators

Unfortunately, many children were maltreated by parent figures. In fact, 81.2% of child victims were maltreated by a parent figure in 2010 (U.S. Department of Health and Human Services, 2011). This trend was evident across several years, ranging from a low of 78.5% (in 2004) to a high of 87.3% (in 1999; U.S. Department of Health and Human Services, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009). More specifically, in 2010, 84.2% of these perpetrators were biological parents, 11.2% were an unknown parental type, 4.0% were stepparents, and 0.7% were adoptive parents. Further, of the 81.2% of children who were maltreated by a parent figure in 2010, 37.2% were maltreated by their mothers, 19.1% were maltreated by their fathers, 18.5% were maltreated by both parents, 5.6% were maltreated by

their mothers and another individual, and 0.9% were maltreated by their fathers and another individual (U.S. Department of Health and Human Services, 2011). In contrast, only 13% of maltreated children were victimized by someone other than a parent. Further, 6.1% of maltreated children were victimized by non-parent relatives, and 4.4% were victimized by the unmarried partners of their parents. Given these statistics, it was imperative to study the outcomes of children who were maltreated by their parents as well as the characteristics of parents who maltreated their children.

Recent statistics provided by the U.S. Department of Health and Human Services unfortunately did not include information regarding type of maltreatment by perpetrator. Thus, it was difficult to determine the rates of each type of maltreatment committed specifically by parents in the most recent years. Nonetheless, statistics from 2008 suggested that, when specifically examining parents, the most common form of maltreatment was neglect (65.8%), followed by physical abuse (9.4%), psychological abuse (3.9%), other forms of abuse (3.8%), sexual abuse (2.3%), and medical neglect (1.0%). In addition, multiple forms of abuse accounted for 13.7% of maltreatment committed by parents in 2008 (U.S. Department of Health and Human Services, 2008). Similarly, a large epidemiological study also suggested that most maltreated children actually experienced multiple forms of maltreatment (Sullivan & Knutson, 2000). Overall, parents committed similar rates of these specific types of maltreatment over the past several years (U.S. Department of Health and Human Services, 2001, 2002, 2003, 2004, 2007).

Previously, in 2000, professionals at the U.S. Department of Health and Human Services also examined the rates of each type of maltreatment by the parent who perpetrated the abuse. These statistics suggested that the most common form of maltreatment by mothers acting alone

was neglect (46.9%), followed by physical abuse (32.1%) and sexual abuse (3.9%). Conversely, the most common form of maltreatment by fathers acting alone was physical abuse (28.6%), followed by sexual abuse (21.5%) and neglect (12.1%). When considering both parents acting together, the most common form of maltreatment was neglect (21.9%), followed by physical abuse (13.5%) and sexual abuse (8.1%; U.S. Department of Health and Human Services, 2000).

Additional research conducted at Vanderbilt University Medical Center and the Children's Hospital at Denver supported these statistics. This research suggested that "inflicted skeletal trauma" (i.e., physical abuse) was committed most commonly by biological fathers, with fathers being responsible for over 45% of the fractures in children who presented as suspected victims of maltreatment (Starling, Sirotnak, Heisler, & Barnes-Eley, 2007). This research also suggested that the second most common perpetrators of inflicted skeletal trauma were biological mothers, who were responsible for 17% of the fractures in these children. Further, these researchers indicated that males, particularly fathers, were more likely to abuse younger children, thus supporting statistics (described in detail later in this literature review) that young children (i.e., between birth and 3-years of age) were the most commonly abused group of children. Overall, statistics spanning several years suggested that parents were the most common perpetrators of child maltreatment, with neglect and physical abuse being the most common maltreatment.

Child-Perpetrator Relationship Characteristics

When examining child maltreatment, the relationship between the victim and the perpetrator generally was important. Prior research demonstrated that children were most likely to be maltreated by immediate family members (Sullivan & Knutson, 2000). In addition, previous studies indicated that children who were abused by their familial relatives were more

likely than children who were abused by non-relatives to experience difficulties (although much of this research focused on the outcomes of adults who were abused sexually during their childhood by relatives versus non-relatives). For example, Ullman (2007) demonstrated that childhood sexual abuse committed by family members was more severe, began at a younger age, and lasted longer than childhood sexual abuse committed by a non-family member. Consistently, individuals who were abused sexually by family members exhibited greater posttraumatic stress symptomatology in adulthood (Ullman, 2007). Another study examining posttraumatic stress symptomatology in individuals who were abused by family members versus non-family members showed that avoidance coping (e.g., evasion, self-destructive strategies) predicted significantly more posttraumatic stress symptomatology (relative to approach coping, which did not predict such symptomatology). In addition, for individuals who were abused sexually by a family member, the relationship between coping strategies and posttraumatic stress symptomatology was stronger than for individuals who were abused sexually by a non-family member (Cantón-Cortés & Cantón, 2010). Unfortunately, little research was conducted on the outcomes of children who experienced other forms of maltreatment (e.g., physical abuse, physical neglect, emotional abuse, emotional neglect) by relatives versus non-relatives.

Nonetheless, Bornstein, Kaplan, and Perry (2007) conducted a unique study examining lay perceptions of child maltreatment (including both sexual and physical abuse). They indicated that, when provided with vignettes describing different abuse scenarios, adults perceived sexual abuse of a child by a parent to be more traumatic and severe than sexual abuse of a child by a babysitter. Conversely, perceptions of trauma and severity of physical abuse did not appear to differ between parents and babysitters (Bornstein et al., 2007). Consistently, research demonstrated that children who were maltreated by their parents exhibited a variety of emotional

and behavioral difficulties in both the short-term (e.g., Jonson-Reid, Kohl, & Drake, 2012; Kim & Cicchetti, 2010; Maikovich, Jaffee, Odgers, & Gallop, 2008) and the long-term (e.g., Mullen, Martin, Anderson, Romans, & Herbison, 1996; Springer, Sheridan, Kuo, & Carnes, 2007).

Child Characteristics

With regard to child characteristics, the most commonly maltreated age group in the United States typically consisted of very young children. In 2010, approximately 34.0% of child victims were between the ages of birth and 3-years (U.S. Department of Health and Human Services, 2011). More specifically, infants from birth to 1-year of age experienced a victimization rate of 20.6 per 1,000 children. Further, victimization rates for young children ranged between 20.6 (in 2009) and 24.4 (in 2006) per 1,000 children in the national population across several years (U.S. Department of Health and Human Services, 2006, 2007, 2008, 2009, 2011). In comparison, the victimization rate for the entire child population (i.e., children of all ages) in 2010 was 9.2 unique victims per 1,000 children in the population. In previous years, the U.S. Department of Health and Human Services divided age groups differently. Between 1995 and 2005, their statistics showed that children from birth to 3-years of age comprised the most commonly maltreated age group, with victimization rates ranging from 13.9 (in 1999) to 16.5 (in 2005) per 1,000 children in this age group in the national population (U.S. Department of Health and Human Services, 1999, 2000, 2001, 2002, 2003, 2004, 2005).

Providing support for the argument that young children were the most commonly maltreated age group, Starling and colleagues (2007) reported a noticeable increase in “inflicted skeletal trauma” (i.e., physical abuse) in children who were approximately 2-years of age. These researchers suggested that this increase in physical abuse in young children could be attributed to their newfound mobility and possible “toddler negativism” (i.e., persistent refusal to comply with

requests or commands), both of which could incite abusive parenting behaviors (Starling et al., 2007, p. 998). Other possible explanations for this age group's increased rates of maltreatment included the extensive amount of time that these children spent with their parents, their physical and psychological dependence on parents to meet their basic needs (Belsky, 1993; Palacio-Quitin, 2005), and their difficulties in regulating their emotions (Belsky, 1993). Clearly, very young children were particularly vulnerable to maltreatment experiences for a variety of reasons, and additional research involving this age group was warranted.

Children with disabilities, particularly emotional and behavioral problems, also were at heightened risk for experiencing maltreatment relative to their typically developing peers (Kendall-Tackett, Lyon, Taliaferro, & Little, 2005; Stith et al., 2009; Sullivan & Knutson, 2000; Turner et al., 2011). In fact, children with disabilities represented 15.8% of the total estimate of maltreated children in 2010 (U.S. Department of Health and Human Services, 2011). Of these maltreated children with disabilities, children with behavior problems represented 3.9%, children with emotional disturbances represented 3.2%, children with learning disabilities represented 1.5%, and children with mental retardation represented 0.6% of maltreatment cases. In comparison, children with medical conditions represented 5.2%, children with physical disabilities represented 0.8%, and children with visual or hearing impairments represented 0.6% (U.S. Department of Health and Human Services, 2011).

Interestingly, a large epidemiological study suggested that, compared to non-disabled children, significantly more children with disabilities experienced multiple forms and multiple episodes (rather than a single episode) of maltreatment (Sullivan & Knutson, 2000). Also worth noting (and of particular interest to the current study), these authors indicated that children with disabilities (including behavior problems) were more likely to experience maltreatment at

younger ages than typically developing children. Specifically, preschool-aged children with disabilities experienced significantly more maltreatment than older children (Sullivan & Knutson, 2000).

Given these findings, it was imperative to examine how children's emotional and behavioral problems could be related to an increased risk for experiencing maltreatment. Clearly, many studies demonstrated that children's emotional and behavioral problems were related to their risk for maltreatment (Black et al., 2001; Stith et al., 2009; Sullivan & Knutson, 2000; Turner et al., 2011). For example, compared to typically developing children, children with behavior problems were seven times more likely to experience many different forms of maltreatment (e.g., neglect, physical abuse, emotional abuse) and were over five times more likely to experience sexual abuse (Sullivan & Knutson, 2000). Of all the disabilities considered (e.g., deafness, speech/language impairments, mental retardation, learning disabilities, health-related disabilities, autism), behavior problems placed children at the highest likelihood of experiencing maltreatment.

Consistently, in a recent empirical study examining disability status and maltreatment in a national sample of children, children with internalizing problems had almost two times the odds of experiencing maltreatment within their family compared to typically developing children (Turner et al., 2011). Interestingly, this study did not reveal significantly higher odds of experiencing maltreatment for children with Attention-Deficit/Hyperactivity Disorder symptomatology (i.e., one type of externalizing problem). Nonetheless, a recent meta-analysis suggested that there was a significant moderate effect size between children's externalizing problems and risk of child physical abuse but a significant small effect size between children's internalizing problems and risk for child physical abuse (Stith et al., 2009). Similarly, there was

a significant moderate effect size between children's externalizing problems and risk of child neglect but a significant small effect size between children's internalizing problems and risk of child neglect. Such discrepancies across studies could be remedied by considering the presentation of children's internalizing problems, particularly those of young children (i.e., irritability) as well as the difficulties that parents experienced in relating to and communicating with their children who were experiencing internalizing problems (Turner et al., 2011). Ultimately, though, it would be necessary to distinguish the specific types of childhood disabilities in maltreatment research because different types of disabilities were associated with different levels of risk (Kendall-Tackett et al., 2005; Turner et al., 2011).

As part of this line of research, it should be noted that, relative to non-maltreating parents, parents who maltreated their children were more likely to *perceive* their children as having more emotional and behavioral problems. For example, Mash, Johnston, and Kovitz (1983) suggested that mothers who were physically abusive reported significantly higher levels of both internalizing and externalizing problems for their children. Whipple and Webster-Stratton (1991) also demonstrated that abusive mothers (but not fathers) reported significantly higher levels of total problems on multiple measures for their children. Further, Wolfe and Mosk (1983) indicated that, compared to non-maltreating mothers, maltreating mothers reported significantly higher levels of anxious/obsessive, depressed/withdrawn, hyperactive, delinquent, and aggressive problems for their children. Overall, given the incidence of emotional and behavioral problems exhibited by maltreated children (Mash et al., 1983; Stith et al., 2009; Wolfe & Mosk, 1983) and given the prevalence of children with emotional and behavioral problems who were victimized (Kendall-Tackett et al., 2005; Turner et al., 2011; U.S. Department of Health and Human Services, 2011), it was imperative to examine the individual

characteristics of these children, particularly characteristics that could be related to (or predispose them to) their specific emotional and behavioral problems.

Unfortunately, it was difficult to determine from these data the temporal sequence of children's emotional and behavioral problems and their experience of maltreatment (Belsky, 1993; Kendall-Tackett et al., 2005). As a result, it was beneficial to examine precursors for emotional and behavioral problems (e.g., temperament) in models that attempted to improve the prediction of child maltreatment. In fact, children's temperament, particularly the difficult constellation of temperament, predicted the experience of behavior problems (Thomas, Chess, & Birch, 1968). In addition, parents' perceptions of their children's temperament were related to parents' parenting behaviors, including maltreatment (Coplan, Reichel, & Rowan, 2009; Thomas & Chess, 1977), with this relationship being bidirectional in nature (Lee, Zhou, Eisenberg, & Wang, 2013). Thus, a discussion of temperament was needed in the context of the current study.

Child Temperament

Temperament was conceptualized broadly as an individual's innate pattern of self-regulation and reactivity. It was thought to be biological and present at birth, with an individual's temperament becoming evident at approximately 3- to 4-months of age (Chess & Thomas, 1996). Temperament may be synonymous with the term "behavioral style" (Chess & Thomas, 1996, p. 33; Thomas & Chess, 1977, p. 9), with behavioral style determining the *how* of an individual's behavior or the *way* in which an individual performs each behavior. Thus, an individual's temperament or behavioral style determined the *way* in which an individual behaved instead of *why* an individual performed a behavior or *how well* he or she did it. Essentially, two individuals could complete identical tasks and report similar reasons or motivations for performing them; however, these individuals could exhibit several differences in the *way* in

which they completed the task. These individual stylistic differences formed the basis for temperament.

In their New York Longitudinal Study (NYLS), Thomas, Chess, Birch, and Hertzig (1960) examined the role of children's individual differences in their development. In contrast to theories suggesting that infants' development was influenced solely by either nature or nurture, Thomas and Chess demonstrated systematically that infants were born with individual differences that interacted with the environment. It was this interaction that influenced either their healthy or unhealthy emotional and behavioral development (Chess & Thomas, 1996; Thomas et al., 1960). In fact, the NYLS identified nine basic individual differences or dimensions of temperament (Thomas & Chess, 1977).

These nine dimensions of temperament included the following. *Activity level* referred to the motor element of an individual's functioning and the proportion of an individual's day that was spent as active or inactive. *Rhythmicity* or *regularity* referred to the predictability (or lack thereof) in timing of an individual's functions (e.g., sleep-wake cycle, hunger/feeding pattern, or elimination pattern). *Approach or withdrawal* referred to the quality of an individual's responses to new stimuli (e.g., an unfamiliar person, food, or toy). Within this dimension, *approach* was characterized as positive, in that individuals who exhibited approach responses demonstrated positive mood expressions (e.g., smiling, laughing, verbalizations) and behaviors (e.g., engaging in play with a new person, swallowing an unfamiliar food). In contrast, *withdrawal* was characterized as negative, in that individuals who exhibited withdrawal responses demonstrated negative mood expressions (e.g., fussing, crying, grimacing) and behaviors (e.g., retreating from or pushing away an unfamiliar person, spitting out an unfamiliar food).

Adaptability referred to the ease with which an individual's initial response to new or altered situations was modified in a preferred direction. *Threshold of responsiveness* referred to the level of intensity of stimulation (whether it was sensory, environmental, or social) that was necessary to induce a response from an individual, regardless of the type of response or the sense that was stimulated. *Intensity of reaction* referred to the energy level of an individual's response to a given stimuli, regardless of the quality or direction of the response. *Quality of mood* referred to the degree to which an individual exhibited happy, pleasant, or friendly behavior as opposed to irritable, crying, unpleasant, or unfriendly behavior. *Distractibility* referred to the degree to which an individual's ongoing behavior was interfered with by extraneous environmental stimuli. *Attention span* referred to the length of time that an individual pursued a given activity, and *persistence* referred to the degree to which an individual maintained an activity given any interferences to the continuation of the direction of that activity (Chess & Thomas, 1996; Thomas & Chess, 1977).

Further, Thomas and Chess (1977) noted (via factor analysis and qualitative analysis of the NYLS data) that these nine dimensions of temperament aligned into three temperament constellations: *Easy*, *Difficult*, and *Slow-to-Warm-Up*. Overall, individuals classified as *Easy* were characterized as exhibiting regular patterns in biological functions (e.g., sleep, hunger, elimination), positive approach responses to novel stimuli, ease of adaptability to environmental change, and predominantly positive mood that was mild to moderate in intensity (Thomas & Chess, 1977). In general, easy children were considered to be pleasant by others around them, as they tended to smile at strangers, experienced little trouble accepting and obeying rules, fussed very little at frustration, adapted well to change, and accepted new foods easily. Thomas and

Chess (1977) reported that approximately 40 percent of their NYLS sample was comprised of easy children.

Individuals classified as *Slow-to-Warm-Up* were characterized as exhibiting mild but negative responses to novel stimuli and slow adaptability even after repeated exposure to such stimuli (Thomas & Chess, 1977). Nonetheless, these children typically began to show more positive quality of mood (still of mild intensity) and approached responses after many repeated exposures that occurred in an environment free of pressure to adapt (Thomas & Chess, 1977). Thomas and Chess (1977) reported that approximately 15 percent of their NYLS sample was comprised of slow-to-warm-up children.

Lastly, individuals classified as having *Difficult* temperaments exhibited irregular sleep, hunger, and elimination patterns, negative withdrawal responses to novel stimuli, slow (or lack of) adaptability to environmental change, and predominantly negative mood of high intensity (Thomas & Chess, 1977). In stark contrast to easy children, difficult children typically required much longer to adjust to unfamiliar situations, individuals, or routines. During this adjustment period of repeated exposure, difficult children often fussed, cried, or tantrumed loudly, highlighting their hallmark features of slow adaptability and intense, negative quality of mood. Thomas and Chess (1977) reported that approximately 10 percent of their NYLS sample was comprised of difficult children.

Not surprisingly, children who displayed more difficult patterns of temperament showed less favorable outcomes than children with easier temperaments (Rutter, Birch, Thomas, & Chess, 1964; Thomas & Chess, 1977; Thomas et al., 1968). In fact, certain facets of difficult temperament were highly predictive of psychopathology in both children and adults (Thomas et al., 1968). For example, Kagan, Snidman, Zentner, and Peterson (1999) indicated that children

who had been classified as “high reactive” (i.e., having difficult temperament) in infancy were more likely to exhibit symptoms of anxiety at 7-years of age. In addition, low adaptability and more withdrawal responses were related to depression and anxiety in children and adults, whereas low attention and high activity were related to externalizing problems and substance use (Merikangas, Swendsen, Preisig, & Chazan, 1998).

With regard to the prediction of child maltreatment, child temperament as implicated previously as playing a role (Belsky, 1980; Parke & Collmer, 1975). Unfortunately, very few studies examined the temperament characteristics of children who were maltreated, much less the role of young children’s temperament in the prediction of maltreatment (Casanueva et al., 2010). Casanueva and colleagues (2010) reported, however, that mothers of young children (who ranged in age from birth to 23-months) who had been investigated for child maltreatment reported a substantially higher prevalence of difficult temperament (i.e., 36% higher) in their young children relative to those who had not been investigated for child maltreatment. Additionally, compared to children with easy temperament characteristics, very young children who were perceived by their mothers as having more difficult temperaments were more likely to experience emotional neglect (Harrington, Black, Starr, & Dubowitz, 1998). Research also suggested that parents were more likely to abuse their children with difficult temperaments if the parents exhibited low perceived control (Bugental, Blue, & Cruzcosa, 1989). Given that temperament may predispose children to both the experience of maltreatment and to the development of internalizing and externalizing problems, particularly in the context of poor parenting practices, it was thought that relationships among these variables likely would be of importance in the refined prediction of child maltreatment potential.

Parent Characteristics

In addition to child characteristics, parent characteristics (including parent temperament and parenting behaviors) were important variables to consider in the study of child maltreatment potential because of the bidirectional relationships that were noted between parents' and children's patterns of behavior. Thomas and Chess' (1996) concept of *goodness of fit* emphasized the importance of studying not only parents' influence on their children but also children's influence on their parents. More specifically, goodness of fit referred to the degree to which an individual's abilities, motivations, and behavioral style were in accord with his or her environmental demands (Chess & Thomas, 1996). Optimal positive development occurred when an individual's pattern of behavior existed in harmony with environmental expectations, demands, and opportunities. Nonetheless, difficulties (e.g., emotional and behavioral problems) could arise when an individual's behavioral style was discordant with his or her environment. Thomas and Chess (1996) suggested that, if there was "dissonance between the capacities and characteristics of the organism, on the one hand, and the environmental opportunities and demands, on the other hand, there is poorness of fit, which leads to maladaptive functioning and distorted development" (pp. 52-53).

Temperament and Personality

Given these findings, it was important to consider the parent-child relationship in the context of any model examining child maltreatment potential, especially when both parents and their children had difficult temperament characteristics. Essentially, if both the parent and child exhibited qualities of a difficult temperament (and, as a result, experience difficulties with negative reactivity and slow adaptability), parent-child interactions likely would be highly discordant, resulting in deleterious experiences for both the parent and the child. Such

deleterious experiences could result ultimately in child maltreatment. In fact, recent research suggested that, when both parent and child exhibited difficult temperament characteristics, mothers' difficult temperament was related to a lower likelihood of using positive parenting practices and to higher levels of parenting stress (Middleton & Renk, 2012). It appeared as though very little (if any) research examined the role that goodness of fit between parent and child temperament in the prediction of child maltreatment or maltreatment potential. Such a gap in the literature needed to be addressed.

Clearly, when examining goodness of fit, it also was necessary to study the parenting behaviors that contributed to parent-child interactions. Of particular interest in this study, Thomas and Chess (1977) suggested that parent temperament likely had a strong influence on parenting behaviors. Although temperament often was viewed as a childhood construct, with little research examining this construct in adults, temperament could be examined in later childhood, adolescence, and adulthood (Rothbart & Posner, 2006; Rothbart & Sheese, 2007). Based on previous research, temperament remained relatively stable over time (i.e., into adulthood), but its expression could differ depending on the organism-environment interaction (Thomas & Chess, 1977). Further, stability of temperament into adolescence (and likely into adulthood) was attributed primarily to genetic factors (Ganiban, Saudino, Ulbricht, Neiderhiser, & Reiss, 2008). Given that temperament had a genetic component (discussed below) and that parent temperament was thought to impact parenting behavior, this field of research needed to be expanded to include child maltreatment as a possible outcome of the interaction between parent temperament, child temperament, and other variables.

As already noted, there was much evidence suggesting that temperament had a genetic component (Braungart, Plomin, DeFries, & Fulker, 1992; Cyphers, Phillips, Fulker, & Mrazek,

1990; Goldsmith, Buss, & Lemery, 1997; Goldsmith, Lemery, Buss, & Campos, 1999; Oniszcenko et al., 2003; Saudino, McGuire, Reiss, Hetherington, & Plomin, 1995; Strelau, 2008; Zawadzki, Strelau, Oniszcenko, Riemann, & Angleitner, 2001). One large study of over 1500 individuals suggested that genetics accounted for approximately 50% of reported variance in temperament (Oniszcenko et al., 2003). Another study of over 1000 individuals indicated that genetic factors accounted for approximately 66% of self-reported and peer-reported variance in temperament (Zawadzki et al., 2001). In addition, twin studies demonstrated genetic effects for eight of the nine dimensions of temperament (i.e., approach/withdrawal, adaptability, threshold of responsiveness, intensity of reaction, quality of mood, persistence, distractibility and activity level; Cyphers et al., 1990). Specifically, the heritability estimates for these eight dimensions of temperament ranged from 0.44 to 0.65 according to Cyphers and colleagues (1990). These authors also suggested that the dimension of rhythmicity likely was not heritable because the items measuring this characteristic relied largely on the parents' report of activities (e.g., naps, bedtime, feeding) that were controlled by parents' own schedules and preferences, rather than children's actual biological timetable. Adoption studies yielded similar heritability estimates ranging from 0.35 to 0.57 (Braungart et al., 1992).

Given the findings regarding the heritability of temperament, it was expected that parent temperament and child temperament would be related. Nonetheless, further research was needed to examine how parent temperament might predict child temperament and how parent and child temperament might interact (i.e., in terms of goodness of fit) in the context of child maltreatment potential. Some previous research suggested that parent temperament was predictive of child maltreatment potential. Although parent temperament was not researched extensively, several specific dimensions of parents' temperament were studied as risk factors for child maltreatment.

For example, one meta-analysis identified a significant large effect size between parental anger/hyper-reactivity (which might be representative of the dimensions of *intensity of reaction* and *threshold of responsiveness* in temperament) and child physical abuse (Stith et al., 2009). In addition, mothers who reported higher levels of negative temperament/personality characteristics (i.e., mistrust, eccentric perceptions, aggression, manipulativeness, and self-harm) exhibited higher levels of corporal punishment and inconsistent discipline (Latzman et al., 2009). Higher levels of inconsistent discipline also were related to mothers' higher levels of self-reported disinhibition and impulsivity.

Unfortunately, much research concerning temperament in adulthood, in reality, measured personality constructs. Further, the terms "temperament" and "personality" often were used interchangeably in current research. Nonetheless, Rothbart (1989) suggested that temperament and personality were similar but that personality should be considered "a more inclusive term than temperament, in that personality includes cognitive structures such as self-concept, in addition to specific expectations and attitudes toward the self and others" (p. 220). Further, temperament and other factors (e.g., social cognition, cognitive self-regulative strategies, culture, SES, relationships with parents, relationships with siblings, relationships with peers) influenced and interacted with one another in order to shape individuals' personality (Marmor, 1983; Rothbart, 1989; Thomas & Chess, 1989). In fact, a genetic link was noted between temperament and the Big Five personality traits (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience; Costa & McCrae, 1992; Kandler et al., 2012; Rothbart, 2007). Specifically, temperament predicted the Big Five traits of extraversion, neuroticism, and conscientiousness (Rothbart, 2007). Given these considerations, temperament was deemed by many to be a measure of "pre-personality."

Given that temperament and personality were different but related constructs and given that personality "contribute[d] greatly to the experience and expression of temperament" (Rothbart, 1989, p. 220), personality also should be discussed in the context of child maltreatment potential. Nonetheless, most of the research regarding personality and child maltreatment examined the personality characteristics of individuals who were maltreated in childhood. Fewer studies investigated the personality factors that were exhibited by parents in conjunction with child maltreatment potential. Of these studies, many revealed that parents' personality disorders predicted child maltreatment (e.g., Fontaine & Nolin, 2012; Perepletchikova, Ansell, & Axelrod, 2012). Given that emotion regulation was a core feature of some of these personality disorders (e.g., Borderline Personality Disorder), it might be beneficial to also examine emotion regulation, a core component of many personality disorders and a construct that was related to temperament.

Emotion and Behavior Regulation

The concept of emotion regulation was tied closely to temperament, with many parallels between these two constructs (Rothbart & Sheese, 2007; Saarni, 2006). In fact, temperament could be conceptualized as a regulator of behavior (Strelau, 1983, 2008). As discussed previously, temperament had many implications for individuals' self-regulation, with emotion regulation being of particular interest to this study. Certain dimensions of temperament (i.e., intensity of reaction, threshold of responsiveness, approach/withdrawal, quality of mood, adaptability) clearly underlied the construct of emotion regulation, and some researchers even viewed emotion regulation as one component of temperament (Saarni, 2006). Essentially, however, temperament was a precursor in the development of individuals' emotion regulation capabilities and tendencies, although temperament could not describe or encompass entirely the

intricate construct of emotion regulation (Rothbart & Sheese, 2007; Saarni, 2006; Thompson, 1994). As a result, it might be beneficial to study temperament and emotion regulation collectively, especially in the context of child maltreatment potential.

There were many definitional inconsistencies within the emotion regulation literature, however (Bridges, Denham, & Ganiban, 2004; Gross & Thompson, 2007; Saarni, 2006; Thompson, 1994; Thompson, Lewis, & Calkins, 2008). Overall, there was agreement that emotion regulation involved the inhibition and dampening as well as the maintenance and enhancement of emotional arousal (Briges et al., 2004; Gross & Thompson, 2007; Rothbart & Sheese, 2007; Thompson, 1994). It should be noted that, as part of these processes, both positive and negative emotions were regulated, although individuals tended to report attempting to down-regulate their negative emotions (e.g., sadness, anxiety, anger) more frequently than attempting to up-regulate positive emotions (e.g., pride, happiness; Gross, Richards, & John, 2006). Emotion regulation also determined the intensity, onset, duration, persistence, and lability of emotional experiences (Gross & Thompson, 2007; Rothbart & Sheese, 2007; Saarni, 2006; Thompson, 1994). Emotion regulation might be either conscious or unconscious and either automatic or controlled (Gross & Thompson, 2007).

Saarni (2006) stated simply that emotion regulation consisted of two components: how the individual modulated (i.e., via intensity or duration) his or her experience of emotional arousal as well as how the individual managed his or her external expression of the emotion being experienced. Saarni (2006) related emotion regulation to temperament by suggesting that individuals' approach/withdrawal tendencies served as a regulatory mechanism by increasing or decreasing the likelihood of experiencing various emotions in the face of a given emotionally arousing situation. Further, Saarni (2006) noted that, although they were similar constructs,

emotional reactivity was distinct from emotion regulation. For example, like emotion regulation, emotional reactivity was related to temperament. Emotional reactivity also was linked to individuals' "biological bias relative to the threshold for emotion elicitation" (i.e., threshold of responsiveness; Saarni, 2006, p. 246).

In contrast, Thompson (1994) suggested that emotion regulation was the result of the regulation of many distinct but interrelated processes. First, the regulation of neurophysiological and neurobiological phenomena, including excitatory and inhibitory mechanisms (i.e., the autonomic nervous system), was thought to comprise one component of emotion regulation (Thompson, 1994; Thompson et al., 2008). Given the biological nature of this component, however, some investigators related this process to emotional reactivity (Saarni, 2006). In any case, this component of emotion regulation likely tied to individuals' threshold of responsiveness and intensity of reaction (Saarni, 2006). In addition, attentional management played a role in emotion regulation via internal or external redirection of attention toward or away from emotionally arousing stimuli (i.e., "attentional deployment"; Gross & Thompson, 2007, p. 13; Rothbart & Sheese, 2007; Thompson, 1994). In other words, individuals could choose to shift their attention mentally in order to regulate emotion or to remove themselves physically from an emotionally arousing situation (or to approach a pleasant situation).

Clearly, what the individual paid attention to in any given situation had implications for the intensity, onset, duration, persistence, and lability of the emotions experienced. This component of emotion regulation was related theoretically to the approach/withdrawal (similar to Saarni's [2006] conceptualization), attention span/persistence, and distractibility dimensions of temperament. In particular, individuals altered their interpretations or attributions of emotionally arousing experiences in order to help regulate their emotions (i.e., "cognitive change" or

cognitive reappraisal; Gross & Thompson, 2007, pp. 13-14; Thompson, 1994). Individuals also altered their interpretations of their own psychophysiological reactions to emotionally arousing experiences as part of emotion regulation (Thompson, 1994). In addition, the selection and use of coping resources (particularly the use of interpersonal resources and social/emotional support) played a role in emotion regulation (Thompson, 1994).

Further, individuals could regulate their emotions externally by selecting or creating environments and relationships that had appropriate emotional demands with which they were comfortable and that fit their characteristics and capabilities (i.e., "situation selection" and "situation modification"; Gross & Thompson, 2007, pp. 11-13). Finally, emotion regulation also relied on individuals choosing carefully how to express their emotions or on selecting adaptive response alternatives that facilitated the achievement of their goals in the face of emotionally arousing situations (i.e., "response modulation" or expressive suppression; Gross & Thompson, 2007, p. 15; Thompson, 1994). For example, Thompson (1994) suggested that, in a highly negative emotionally arousing situation, it was more adaptive for an adult to become angry and then use problem solving techniques or to provide a persuasive argument than it was to resort to a physical attack or verbal insults. Given the outcomes that could occur with child maltreatment, this last component of emotion regulation might be particularly difficult for parents who maltreated their children. In addition, given young children's lower levels of verbal and physical abilities, it was likely far more difficult for them to utilize this final technique of emotion regulation.

Not surprisingly, young children required the help of their parents to regulate their emotions extrinsically (Bariola, Gullone, & Hugues, 2011; Saarni, 2006; Thompson, 1994). For example, parents might offer guidance by providing interpersonal and emotional coping

resources (i.e., by acting as a secure base and providing emotional support) or by providing material coping resources (i.e., distracting the child from intense negative emotions by shifting his or her attention to a favorite toy or blanket). Young children also learned to turn to their parents (i.e., social referencing) in order to determine how they should react in emotionally ambiguous situations (Saarni, 2006). Thus, parents aided in the development of their children's emotion regulation by acting as models (Bridges et al., 2004; Thompson, 1994) and/or by utilizing scaffolding or coaching techniques (Saarni, 2006). Perhaps most importantly, the development of emotion regulation occurred in the context of the caregiving relationship, and attachment literature suggested that children learned to regulate their emotions based on their caregivers' responses (or lack thereof) to their cues (Cicchetti & Toth, 1995)

As individuals aged, they became more capable of regulating their own emotions intrinsically, especially if their parents taught them how to regulate their emotions effectively (Gross & Thompson, 2007). If parents exhibited emotion dysregulation, however, children might be more likely to exhibit dysfunctional emotional development (Bariola et al., 2011). Additionally, if parents were neglectful, children might not have appropriate models from whom to learn effective emotion regulation strategies. Further, if parents were abusive (either physically or emotionally), children might learn maladaptive emotion regulation strategies that would not serve them well as they matured and became adults or parents themselves (Saarni, 2006). For example, one study indicated that young maltreated children exhibited more difficulties with emotion regulation (e.g., higher anger intensity, lower positive affect intensity) and internalizing problems than non-maltreated children in the context of mother-child interactions (Robinson et al., 2009).

Generally, individuals who had difficult temperament had more difficulty regulating their emotions, behaviors, and reactions to emotionally arousing or stressful stimuli. As discussed previously, intensity of reaction and threshold of responsiveness were related to emotion regulation or reactivity. Individuals with difficult temperament typically exhibited a high intensity of reaction and a low threshold of responsiveness, characteristics that were clearly indicative of difficulties with emotion regulation (i.e., dysregulation) in the face of negative situations. Further, children with difficult temperament might elicit difficulties with emotion regulation in their parents. For example, parents with low perceived control responded to their difficult children with heightened physiological reactivity (Bugental & Cortez, 1988).

Ultimately, it was no surprise that parents who experienced difficulties with emotion regulation were more likely to maltreat their children. For example, in an effort to shed light on personality differences between groups of parents (e.g., parents found guilty of abuse, spouses of parents found guilty of abuse, mothers convicted of child neglect, non-abusive college-student mothers, non-abusive middle-income mothers, non-abusive low-income mothers), Spinetta (1978) demonstrated that, compared to non-abusive mothers, abusive mothers reported a significantly higher tendency to become upset or angry. Further, abusive parents were characterized as having difficulty controlling their anger (Ammerman, 1990) and as displaying "strong emotional reactance" (Cantos, Neale, O'Leary, & Gaines, 1997, p. 634). In addition, the finding that maltreated children exhibited more difficulties with emotion regulation may be, in part, because maltreating mothers exhibited poorer emotion regulation along with higher anger intensity and lower positive affect intensity (Robinson et al., 2009). Further, abusive mothers exhibited stronger, more intense, impulsive emotional reactions to situations involving their children (Frodi & Lamb, 1980). Given these characteristics, parents who were emotionally

reactive might have a difficult time managing their parenting and environmental stress, particularly when their families already were at risk for child maltreatment.

Stress

Both parenting stress and environmental stress were cited widely as risk factors for child maltreatment (Black et al., 2001). Parenting stress was of particular interest in the study of child maltreatment because of its emphasis on the transactional relationship between parents and their children. In addition, the stress of raising very young children was noted in families where child maltreatment had occurred (Barton & Baglio, 1993). Not surprisingly, numerous studies indicated that parenting stress increased the risk for child maltreatment. In their meta-analysis, Stith and colleagues (2009) reported small but significant effect sizes between parenting stress and child physical abuse and neglect. Further, Mash and colleagues (1983) demonstrated that physically abusive mothers reported significantly more parenting stress than did non-abusive mothers. Compared to parents who endorsed low child maltreatment potential, parents who reported high abuse potential also reported higher levels of parenting stress (Holden & Banez, 1996; Holden, Willis, & Foltz 1989), and stress predicted significantly child maltreatment potential in both mothers and fathers (Rodriguez, 2010; Rodriguez & Green, 1997). In contrast, Whipple and Webster-Stratton (1991) demonstrated that abusive and non-abusive mothers and fathers did not differ in terms of parenting stress (although the non-abusive parents in this study were from a parenting clinic specializing in the treatment of children's externalizing problems).

Many studies also suggested that perceptions of children's difficult behaviors (Mash et al., 1983) and difficult temperaments (Gelfand, Teti, & Fox, 1992; Harrington et al., 1998; Mäntymaa, Puura, Luoma, Salmelin, & Tamminen, 2006; Östberg & Hagekull, 2000) were related to parents' level of parenting stress. Specifically, Mantymaa and colleagues (2006)

reported that parenting stress predicted significantly parents' perceptions of their children having a difficult temperament. Harrington and colleagues (1998) also suggested that parents who experienced high levels of stress were more likely to perceive their children as having more difficult temperament, placing these children at an increased risk for experiencing emotional neglect. Further, Östberg and Hagekull (2000) demonstrated that mothers' perceptions of their children having a fussy or difficult temperament contributed directly to mothers' experience of parenting stress and that mothers' perceptions of their children as being irregular (i.e., having low levels of rhythmicity) contributed indirectly to mothers' experience of parenting stress. Overall, it appeared as though parenting stress and children's difficult temperament had a bidirectional and robust relationship, suggesting the importance of these variables for understanding parent-child interactions generally and child maltreatment potential more specifically.

Although environmental stress did not necessarily include the transactional relationship between parents and their children, it appeared to be another important risk factor in the broader context for child maltreatment potential. Stressors such as low socioeconomic status (SES), unemployment, large family size, and single-parent households were linked to an elevated risk for child maltreatment in many studies (Berger, 2004; Sullivan & Knutson, 2000; Turner et al., 2011; Whipple & Webster-Stratton, 1991). For example, small but significant effect sizes exemplified the relationships between multiple environmental stressors (e.g., personal stress, unemployment, single- parenthood, family size, SES) and child physical abuse (Stith et al., 2009). Further, a large significant effect size was noted between personal stress and child neglect and a moderate significant effect size was noted between unemployment and child neglect. Finally, small but significant effect sizes were noted between SES and both child physical abuse

and neglect (Stith et al., 2009). Thus, overall, economic distress was associated positively with multiple forms of child maltreatment (Sullivan & Knutson, 2000).

Whipple and Webster-Stratton (1991) also suggested that stressors such as poverty, low social position, maternal depression, and low marital support were present to a greater degree in maltreating families than in non-maltreating families. Further, in a very large national sample, Turner and colleagues (2011) demonstrated that living in single-parent families or blended/step-families placed children at significantly higher odds (over two times the odds) for being maltreated. Situational stress (e.g., stressful life changes, death in the family) also had implications for the incidence of child maltreatment. Overall, abusive mothers reported higher levels of life or situational stress than non-abusive mothers (Rosenberg & Reppucci, 1983). In addition, Whipple and Webster-Stratton (1991) demonstrated that abusive mothers reported significantly more stressful life changes and a significantly higher impact from these negative life changes than non-abusive mothers (although such findings were not noted for fathers).

Another type of stress that was of interest in the study of child maltreatment potential came in the form of daily hassles. In fact, evidence suggested that daily hassles were more predictive of psychological symptoms than were stressful life events and major life events (e.g., divorce, death in the family, job change) or situational stressors (e.g., poverty, unemployment, single-parenthood; Kanner, Coyne, Schaefer, & Lazarus, 1981; Lazarus & Folkman, 1984). Given these findings, families who were at risk for child maltreatment might be at risk for higher levels of daily hassles than non-maltreating families. Nonetheless, little research examined the role of daily hassles in predicting child maltreatment potential. As a result, daily hassles were examined further.

Coping

When studying stress, it also was imperative to study the role of coping. Given that outcomes were related indirectly to stress through coping (Lazarus & Folkman, 1987), the role of coping was just as important as the role of stress in predicting child maltreatment potential. In general, coping was defined as both cognitive and behavioral strategies designed to manage stress. Coping was similar to emotion regulation in that both variables were thought to be part of the broader construct of affect regulation (Gross & Thompson, 2007). In addition, temperament was a determinant of coping style (Heszen, 2012). Coping was thought to be a more effortful, conscious behavior than emotion regulation or the expression of temperament, however. In addition, emotion regulation occurred over moments in response to an emotionally arousing situation, whereas coping occurred over much longer periods of time (Gross & Thompson, 2007). Finally, both positive and negative emotions were altered during emotion regulation, whereas coping focused on reducing negative affect (Gross & Thompson, 2007). Thus, emotion regulation and coping were related but different. As a result, both were included in this study. A discussion of coping also was necessary in the context of this study.

According to Roth and Cohen (1986), coping strategies could be divided into two broad categories, *approach* or *avoidance*. These two categories referred to the orientation of individuals' emotions and cognitions as moving either toward or away from perceived threat. Essentially, avoidant coping strategies tended to decrease stress by keeping a threat out of awareness, thereby preventing the individual's anxiety about the threat from becoming incapacitating or disabling. In contrast, approach coping strategies involved addressing a given threat actively. Such an approach allowed individuals to ventilate affect and take appropriate

actions, thereby helping to control the threatening situation and to reduce stress (Roth & Cohen, 1986).

Typically, avoidance coping strategies could be quite effective in the short-term for reducing stress and anxiety, particularly during the initial time frame when psychological and emotional resources were being taxed heavily. In the long-term, however, avoidance might lead to more negative outcomes because it prevented the individual from being able to detect the opportunity to change a threat. It also allowed for emotional numbing, unwanted and distressing intrusions, and maladaptive avoidance behaviors. On the other hand, approach coping was considered to be a more effective means of coping, particularly in the long-term, and was related to more positive outcomes because it allowed for a deeper and fuller expression and experience of psychological distress (Roth & Cohen, 1986).

Overall, avoidance was thought to be more effective for situations that were uncontrollable. Essentially, in uncontrollable threatening situations, there was no advantage for using approach strategies, as approach strategies increased stress and provoke nonproductive worry, anxiety, depression, or frustration. In contrast, however, approach was more effective for situations that possibly might be controlled because it allowed individuals to notice and take advantage of opportunities for controlling or even changing the threatening situation for the better (Roth & Cohen, 1986). Roth and Cohen (1986) asserted that alternating between the use of approach and avoidance might be the most effective coping strategy of all. Such an approach allowed individuals to conserve resources. In other words, individuals avoided during times where nothing could be done but then worked through threatening situations when it was possible to do so.

In contrast to Roth and Cohen's (1986) theory, Lazarus and Folkman's (1984) theory of coping suggested that coping was a transactional process between stress and emotion. Specifically, stress arose out of a problematic individual-environment interaction, and coping was an attempt to either alleviate emotional distress (i.e., *emotion-focused coping*) or to alter the actual conditions of the troubled individual-environment relationship (i.e., *problem-focused coping*; Lazarus & Folkman, 1987). Additionally, coping and emotions occurred as a result of an individual's *appraisal* of a situation, or the constant and ongoing evaluation of the significance of a given situation to his or her well being (Lazarus & Folkman, 1987). That is, an individual's appraisal of a situation determined the method of coping that was employed (if coping was even deemed necessary) and the subsequent intensity and types of emotions that were experienced.

According to Lazarus and Folkman (1987), there were two types of appraisal. *Primary* appraisals occurred first and allowed the individual to determine the nature of the given stressful situation. Primary appraisals further were subdivided into three types, including *harm* (i.e., stress that already occurred), *threat* (i.e., anticipated stress or harm), and *challenge* (i.e., stress that allowed for potential gain or the opportunity for mastery). After primary appraisal of the nature of a given stressor, *secondary* appraisals occurred, with the individual determining if he or she should take action, what actions to take, and what coping strategies to employ in order to alleviate stress. Thus, similar to Roth and Cohen's (1986) theory of stress, much of the coping process depended on whether individuals perceived situations to be controllable. Lazarus and Folkman (1987) also held that *threat* was not simply a one-dimensional attribute of a situation. Instead, threat occurred when the attributes of a situation or environment interacted with individuals' characteristics (perhaps including temperamental traits), which then allowed or prevented the individual from perceiving the situation or environment as threatening. In addition

to their theory of coping, Lazarus and Folkman (1984) also asserted that daily hassles were just as stressful, if not more stressful, than major life events.

Extensive literature focused on the coping strategies employed by children who experienced maltreatment (e.g., Cantón-Cortés & Cantón, 2010; Flett, Druckman, Hewitt, & Wekerle, 2012; Hager & Runtz, 2012; Lopez, Begle, Dumas, & de Arellano, 2012; Merrill, Thomsen, Sinclair, Gold, & Milner, 2001; O'Leary, 2009; Robboy & Anderson, 2011; Runtz & Schallow, 1997). Surprisingly, however, relatively little research examined the coping strategies of abusive parents, including how stress and coping interacted in relation to the perpetration of maltreatment (Rodriguez, 2010). Further, in the scant amount of research that examined these relationships, coping strategies were not defined consistently, with each study defining and examining coping in a different way.

Nonetheless, some research demonstrated that a small but significant effect size occurred between parent coping and problem-solving skills and child physical abuse, suggesting that more effective coping in parents was related to a lower risk of perpetrating child physical abuse (Stith et al., 2009). Further, abusive parents reported a higher level of coping failure compared to non-abusive parents (Gains, Sandgrund, Green, & Power, 1978). In addition, given the proportion of abusive parents who reported high levels of stress, it was worth investigating the coping strategies that might help or hinder parents' emotion and behavior regulation in stressful situations or environments. Although stress had a positive relationship with child maltreatment, it was conceivable that parents' coping strategies might act as a mechanism to either prevent or promote child maltreatment potential in the presence of children's difficult temperament, parenting stress, and/or daily hassles. Understanding such mechanisms could allow parents with difficult temperament characteristics to cope more effectively and to subsequently be able to

better manage their emotional and behavioral reactions and be less likely to maltreat their children. As a result, coping strategies were certainly worthwhile variables to examine in the study of child maltreatment potential.

Further, the existing literature in this area suggested that, overall, coping was related to maltreatment perpetration and often acted as a mechanism through which child maltreatment either was prevented or promoted. Specifically, avoidant coping strategies consistently were correlated significantly and positively with child maltreatment potential (Rodriguez, 2010). For example, with high levels of stress, abusive mothers endorsed more avoidant coping strategies and fewer problem-focused and emotion-focused coping strategies (which were considered to be more effective) than non-abusive controls (Cantos et al., 1997). At lower levels of stress, however, abusive mothers actually reported higher levels of emotion-focused coping than non-abusive controls. Such findings suggested that abusive mothers' emotional reactance in the face of stress was responsible for their inability to utilize problem-focused coping and for their belief that they could not cope with stress effectively. Such attributions resulted in a shift from using more effective strategies (i.e., emotion-focused coping) to less effective strategies (i.e., avoidant coping) in stressful situations (which might include the presence of children's difficult temperament; Cantos et al., 1997). In addition, the use of avoidant coping strategies predicted higher child maltreatment potential (and overreactive disciplinary practices) in both mothers and fathers (Rodriguez, 2010). Avoidant coping also moderated the relationship between stress and maltreatment potential, suggesting that parents who were experiencing high levels of stress and who were using high levels of avoidant coping strategies reported higher levels of child maltreatment potential. In contrast, parents who were experiencing high levels of stress but who

reported lower levels of avoidant coping tended to report lower levels of child maltreatment potential (Rodriguez, 2010).

The utility of different coping strategies might extend prior to individuals becoming parents. For example, a study of the coping strategies employed by expectant mothers (including women experiencing their first pregnancies and pregnant women with older children) suggested that avoidant coping strategies (i.e., cognitive avoidance and emotional discharge) mediated the relationship between pregnancy desire and child physical abuse potential (Rodriguez, 2009). In other words, for women experiencing an unwanted pregnancy, the use of avoidant coping strategies predicted higher levels of child maltreatment potential. In contrast, approach coping strategies were not related significantly to mothers' desire for their pregnancy or child maltreatment potential. Overall, it appeared as though avoidant coping was highly predictive of child maltreatment potential, whereas the use of approach coping was of less concern in the prediction of child maltreatment potential.

Another study examining coping in adolescent mothers suggested that a predisposition for *aggressive coping* (i.e., the combination of a greater acceptance of corporal punishment, the disinhibition of aggression, and the perception of stress) predicted child physical abuse perpetration (Dukewich, Borkowski, & Whitman, 2001). More specifically, aggressive coping mediated the relationship between established risk factors (i.e., lack of social support, maternal psychological maladjustment, lack of preparation for parenting, and difficult child temperament) and child maltreatment potential. In a breakdown of the risk components included in that study, aggressive coping mediated the relationship between child temperament and child maltreatment potential (Dukewich et al., 2001). This finding suggested that the direct relationship between more difficult child temperament characteristics and higher child maltreatment potential became

insignificant when coping was introduced as a predictor as well. As such, the study of coping in the investigation of child maltreatment potential was warranted. It was expected that coping strategies would be predictive of parents' child maltreatment potential in the face of difficulties or conflict, particularly difficult child temperament and parenting stress.

The Present Study

Given the likelihood of child maltreatment potential to be elevated for parents with children who had difficult temperament (Casanueva et al., 2010), who had difficulty regulating their own emotions (Ammerman, 1990; Cantos et al., 1997; Robinson et al., 2009), and who were experiencing stress (Berger, 2004; Sullivan & Knutson, 2000; Turner et al., 2011; Whipple & Webster-Stratton, 1991) as well as subsequent difficulty with coping (Cantos et al., 1997; Rodriguez, 2010), it was imperative to investigate the interplay of these variables in an effort to better predict child maltreatment potential. Although cumulative risk theories (Begle et al., 2010) and transactional theories (i.e., Belsky, 1980, 1993; Green et al., 1974) attempted to predict child maltreatment potential, such theories remained incomplete thus far. As a result, the current study sought to enhance and clarify transactional theories of child maltreatment potential with a new proposed model. See Figure 1.

The strucuture of this model was based on previous research (described in detail in the sections above) that examined the variables of interest and provided some support for the directionality of the paths shown. In particular, it was expected that mother temperament would predict emotion and behavior regulation unidirectionally. In addition, previous research suggested that emotion and behavior regulation (as well as coping processes) would predict child maltreatment potential unidirectionally. Further, the placement of stress in the model was informed by previous research demonstrating that the pathways involving stress and coping flow

from the occurrence of a stressor, to the appraisal of threat, harm, or challenge and then to coping and an outcome. Finally, the placement of child temperament was informed by previous literature demonstrating that child temperament should be predicted by parent temperament and that difficult child temperament should predict child maltreatment potential. Thus, given previous findings and theoretical underpinnings, certain specific unidirectional pathways were proposed and examined for this new model. Overall, by identifying directional predictive relationships among these variables, the findings of this study enhanced our ability to predict child maltreatment potential so that better intervention and prevention efforts could be targeted and tailored for at-risk parents.

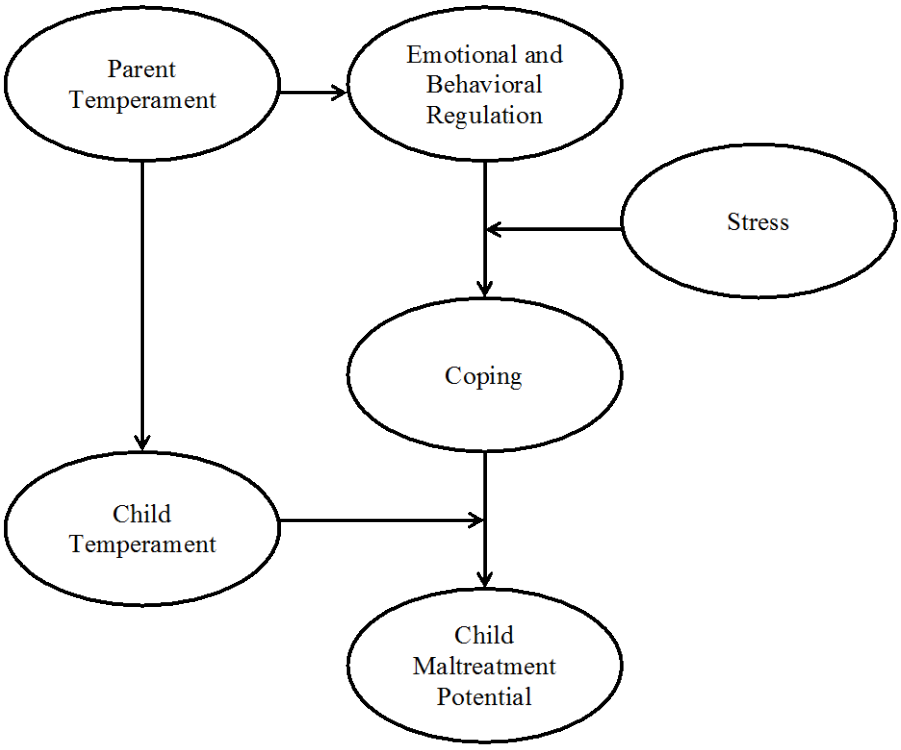

Figure 1. **Proposed Overall Model**

The first purpose of this study was to investigate the relationships among mothers' temperament, mothers' emotion and behavior regulation, stress and coping, young children's temperament, and child maltreatment potential. In particular, it was postulated that mothers' temperament and child maltreatment potential would be related significantly, with mothers who reported higher levels of difficult temperament characteristics reporting higher child maltreatment potential. Further, it was hypothesized that mothers' temperament, emotion and behavior regulation, and child maltreatment potential would be related significantly, with mothers who reported higher levels of difficult temperament characteristics reporting more difficulties with emotion and behavior regulation and higher child maltreatment potential. In addition, it was postulated that mothers' temperament and coping would be related significantly, with mothers who reported higher levels of difficult temperament characteristics reporting less effective coping. Similarly, it was hypothesized that mothers' emotion and behavior regulation would be related significantly to coping, with mothers who reported more difficulties with emotion and behavior regulation reporting less effective coping. Finally, it was postulated that mothers' temperament and young children's temperament would be related significantly and positively.

Further, this study aimed to examine the predictive relationships among mothers' temperament, mothers' emotion and behavior regulation abilities, stress and coping, and young children's temperament in the prediction of child maltreatment potential. Specifically, it was hypothesized that each of the predictors would add unique incremental variance to the prediction of child maltreatment potential. In order to examine this hypothesis, a hierarchical regression was performed. By examining the unique incremental variance accounted for by each of the predictor variables, better prediction of child maltreatment potential could be promoted.

Finally, this study aimed to examine potential mediators within the overall model depicted above. Specifically, it was postulated that the relationship between mothers' temperament and child abuse potential would be mediated by mothers' emotion and behavior regulation. In other words, it was postulated that mothers' temperament would predict significantly mothers' emotion regulation. In turn, mothers' emotion regulation would predict significantly child maltreatment potential (see Figure 2). In order to examine this hypothesis, a series of regression analyses was used to determine the relative contributions of each of the aforementioned variables on child maltreatment potential. These analyses shed light on the relative contributions of each of these variables in predicting child abuse potential.

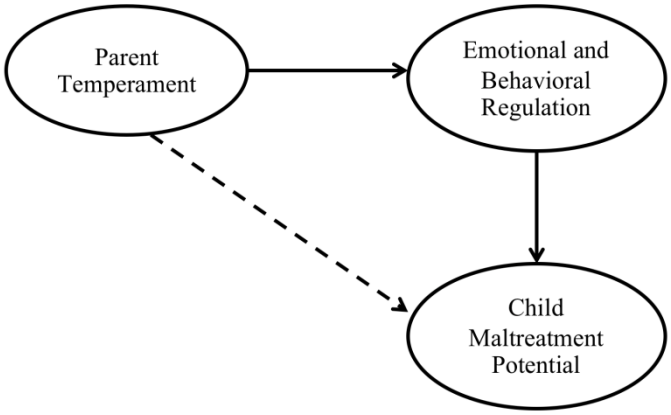

Figure 2. **Mothers' Emotion and Behavior Regulation Mediating the Relationship Between Mothers' Temperament and Child Maltreatment Potential**

CHAPTER TWO: METHODOLOGY

Participants

Data for the proposed study was collected from 158 mothers who had children ranging in age from 1½- to 5-years of age. Mothers were recruited from a national sample via several methods, with 62.0% recruited from Amazon Mechanical Turk, 11.4% recruited from Facebook (via posted announcements), 12.7% recruited from Craigslist (via posted announcements), 4.4% recruited from online parenting communities and forums (via posted announcements), and 9.5% recruited from the University of Central Florida community (e.g., via Good Morning UCF announcements and the Sona system extra credit system). Individuals who participated via Amazon Mechanical Turk were provided with a small monetary compensation (i.e., $2.00). There were 966 individuals who opened the survey online. Overall, 421 participants did not complete the survey in its entirety, and 327 were disqualified for various reasons, including not being parents, having children outside of the specified age range, not living in the United States, or answering validity questions incorrectly. As a result, 218 completed the survey in its entirety. Given the low response rate from fathers, 60 fathers were removed from the sample, leaving 158 mothers in the sample to be analyzed.

The suggested sample size for a hierarchical regression analysis ($p < .05$) with nineteen predictor variables (i.e., the most complex analysis proposed for this study) and a statistical power of .80 was 153 participants in order to detect a medium (R = .36) effect size (Cohen, 1992). Following multicollinearity diagnostics (see Results section below), two predictors were eliminated. As such, the suggested sample size for a hierarchical regression analysis ($p < .05$) with seventeen predictor variables (i.e., the most complex analysis included in this study) and a statistical power of .80 was 146 participants in order to detect a medium (R = .36) effect size

(Cohen, 1992). As a result, the sample collected for this study was large enough to complete the proposed analyses successfully.

With regard to the 158 mothers included in this study, the mean age was 32.28-years (*SD*=6.19-years). The majority of participants was Caucasian (81.0%). Other participants were African American (8.2%), Hispanic (3.8%), Asian American (3.8%), Multiracial (1.3%) or other races not listed here (1.9%). With regard to yearly household income and socioeconomic status, 29.7% earned over $70,000 per year. The remaining mothers were distributed amongst other income brackets (i.e., 3.2% made less than $10,000, 5.7% made $10,000-$20,000, 10.8% made $20,000-$30,000, 12.7% made $30,000-$40,000, 12.7% made $40,000-$50,000, 15.9% made $50,000-$60,000, and 8.9% made $60,000-$70,000). With regard to education, 37.3% of mothers had participated in some college, and 34.2% had earned a bachelor's degree. The remainder of mothers endorsed varying levels of education (e.g., 6.3% earned a high school diploma, 3.2% received vocational training, 15.8% received graduate or professional training, and 3.2% attained a doctoral degree). With regard to marital status, a majority of mothers were married (65.2%), whereas the remainder of mothers were living with their partners (15.2%), single or never married (9.5%), divorced (6.3%), separated (1.9%), remarried (1.3%), or widowed (0.6%). Finally, when examining the young children who were rated by their mothers for this study, the mean age was 2.99-years (*SD*=1.23-years), with girls representing 50.0%, boys representing 49.4%, and 0.6% of mothers (i.e., one participant) selecting "other" as the gender of their child. See Table 1 for participant demographic information.

Procedure

Following IRB approval from the University of Central Florida, advertisements were posted on Good Morning UCF, Sona Systems, Facebook, Craigslist, and various online parenting

communities for parents to follow an online survey link or to contact the Young Child and Family Research Clinic for participation. In addition, small monetary compensation (e.g., $2.00) was provided for participants who were recruited through the Amazon Mechanical Turk system.

The research questionnaires were administered via an online survey. For those participants who chose to complete the questionnaires online, a link was provided that allowed access to the study. Upon accessing the survey link, parents first were asked to review a consent form and indicate agreement to participate (see *Appendix A*). Parents then gained access to and provided ratings on each of the respective measures described below. Following the completion of the survey, a debriefing form was displayed on the screen that explained the purpose of the study and provided references to the relevant research literature about the topic area examined in this study (See *Appendix B*). As noted above, all 158 mothers included in the study participated in the online survey.

Based on usage statistics provided by the online survey system, the average time to complete the survey was approximately 64 minutes. One of the investigators was available via telephone or via email to answer any questions that arose while participants completed the survey. Once surveys were completed, this information was stored securely online. To ensure anonymity, no personally identifying information was required as part of the survey. Following completion of data collection, the database was moved to a password-protected computer in the laboratory of the supervising faculty member. Further, a certificate of confidentiality was secured for this study, as the information collected for this study was particularly sensitive. Finally, all data was analyzed in group format, and no individual survey was singled out for examination.

Measures

Demographics. First, mothers completed a brief questionnaire regarding demographic information. The demographics questionnaire asked mothers to provide information regarding themselves and their children on various demographic variables, such as age, ethnicity, occupation, gender, and other related characteristics. See *Appendix C* for a sample of the demographics questionnaire.

Mothers' Temperament. The *Dimensions of Temperament Scale-Revised for Adults* (*DOTS-R Adult*; Windle & Lerner, 1986) measured mothers' reports of their own temperament. This 54-item questionnaire measures ten characteristics of temperament (the Cronbach alphas noted are from Windle & Lerner, 1986): Activity Level-General (α = .84), Activity Level-Sleep (α = .89), Approach-Withdrawal (α = .85), Flexibility-Rigidity (α = .78), Mood Quality (α = .89), Rhythmicity-Sleep (α = .78), Rhythmicity-Eating (α = .80), Rhythmicity-Daily Habits (α = .62), Distractibility (α = .81), and Persistence (α = .74; Windle & Lerner, 1986). The DOTS-R Adult asks participants to rate items using a four-point Likert scale ranging from *Usually False* (1) to *Usually True* (4). Higher scores on each of the scales indicated higher activity level; more adaptability or greater tendency to approach new situations, people, or events; greater flexibility in the external environment; greater level of positive quality of mood; more regular sleep patterns; more regular eating habits; more regular daily activities and habits; lower distractibility; and a higher persistence for tasks, respectively. For the current study, the temperament dimensions of Activity Level-General, Approach-Withdrawal, Flexibility-Rigidity, Mood Quality, and Rhythmicity-Daily Habits were used, given that these dimensions were related closely to the difficult constellation of temperament (e.g., Billman & McDevitt, 1980; Thomas & Chess, 1977). In this study, the Cronbach alphas of Activity Level-General (.81),

Approach-Withdrawal (.84), Flexibility-Rigidity (.84), Mood Quality (.92), Rhythmicity-Daily Habits (.56) were acceptable. See *Appendix D* for a sample of the DOTS-R Adult.

Mothers' Emotion and Behavior Regulation. The *Emotion Regulation Questionnaire* (*ERQ*; Gross & John, 2003) assessed mothers' self-reported emotion and behavior regulation. Consistent with Gross and Thompson's (2007) conceptualization of emotion regulation, this 10-item questionnaire measures two processes of individuals' regulatory strategies: Cognitive Reappraisal (i.e., emotion regulation) and Expressive Suppression (i.e., behavior regulation). The subscales of the ERQ exhibited acceptable internal consistencies (the Cronbach alphas noted were from Gross & John, 2003): Cognitive Reappraisal (α = .75 - .82) and Expressive Suppression (α = .68 - .76). The ERQ asks participants to rate items using a seven-point Likert scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (7). Higher scores on the Cognitive Reappraisal and Expressive Suppression subscales indicated a greater use of each skill and better ability to regulate emotions and behaviors, respectively. Both the Cognitive Reappraisal and Expressive Suppression subscales of the ERQ were used in the current study. In this study, the Cronbach alphas of Cognitive Reappraisal (.89) and Expressive Suppression (.81) were good. See *Appendix E* for a sample of the ERQ.

The *Difficulties in Emotion Regulation Scale* (*DERS*; Gratz & Roemer, 2004) measured mothers' self-reported difficulties with regulating their emotions during times of distress. This 36-item questionnaire consists of six subscales (Cronbach alphas noted are from Gratz & Roemer, 2004): Nonacceptance of Emotional Responses (i.e., Nonacceptance; α = .85), Difficulties Engaging in Goal-Directed Behavior (i.e., Goals; α = .89), Impulse Control Difficulties (i.e., Impulse; α = .86), Lack of Emotional Awareness (i.e., Awareness; α = .80), Limited Access to Emotion Regulation Strategies (i.e., Strategies; α = .88), and Lack of

Emotional Clarity (i.e., Clarity; α = .84). The DERS also provides a Total score (α = .93; Gratz & Roemer, 2004) that assesses individuals' overall difficulty with emotion regulation. The DERS asks participants to rate items on a five-point Likert scale ranging from *Almost Never or 0-10% of the Time* (1) to *Almost Always or 91-100% of the Time* (5). Higher scores on each of the subscales indicated more difficulty with regulating emotions in the face of distress. For the current study, the Total scale of the DERS was used. The Cronbach alpha of the DERS Total subscale in this study was excellent (.94). See *Appendix F* for a sample of the DERS.

Stress. *The Parenting Stress Index-Fourth Edition-Short Form* (*PSI-4-SF*; Abidin, 2012) assessed mothers' perceived stress. The PSI-4-SF is a 36-item self-report questionnaire that asks participants to rate items on a five-point Likert scale ranging from *Strongly Agree* (1) to *Strongly Disagree* (5). The PSI-4-SF consists of three domains: Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child. These three subscales also combine to form the Total Stress scale. Higher scores on these scales indicated higher levels of parenting stress. Cronbach alphas for each PSI-4-SF scale were all above .90 (Abidin, 2012). For the current study, the Total Stress scale of the PSI-4-SF was used. The Cronbach alpha of the Total Stress subscale in this study was excellent (.93). See *Appendix G* for a sample of the PSI-4-SF

The *Hassles Scale* (*HS*; Kanner et al., 1981) assessed mothers' self-reported experience with daily hassles. The HS consists of a list of 117 daily hassles in the domains of family, friends, work, environment, practical considerations, and chance occurrences. Participants were asked to select which hassles occurred for them in the past month and then to rate the severity of these selected daily hassles on a three-point Likert scale (i.e., 1 = *Somewhat Severe*, 2 = *Moderately Severe*, 3 = *Extremely Severe*). Three subscales can be derived from the HS. Specifically, the Frequency scale indicates a count of the number of daily hassles endorsed

(ranging from 0 to 117). The Cumulated Severity scale indicates the sum of the three-point severity ratings (ranging from 0 to 351). The Intensity scale indicates how intensely the average hassle is experienced by the participant and is calculated by dividing the Cumulated Severity scale by the Frequency scale. For the current study, all three subscales (i.e., Frequency, Cumulated Severity, and Intensity) of the HS were proposed for use. Given the results of multicollinearity diagnostics, however, the Frequency and Intensity subscales were eliminated from further analyses, and only the Cumulated Severity subscale of the HS was used (see Results section below). The Cronbach alpha of the Cumulated Severity subscale in this study was excellent (.97). *Appendix H* contains a sample of the HS.

Coping. The *Ways of Coping Questionnaire* (*WOC*; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) assessed mothers' coping styles. The WOC consists of 66 items: 50 items assessing coping behaviors (i.e., thoughts and actions that individuals employ to manage stressful situations) as well as 16 distractor items. The WOC asks participants to rate items on a four-point Likert scale that ranges from *Does Not Apply and/or Not Used* (0) to *Used a Great Deal* (3). Each of the 50 items assessing coping behaviors loads onto one of two subscales (Cronbach alphas noted are from Folkman & Lazarus, 1985): Problem-Focused Coping ($\alpha = .85$) or Emotion-Focused Coping ($\alpha = .56$-$.84$). Eight subscales also can be derived (Cronbach alphas noted are from Folkman et al., 1986): Confrontive Coping ($\alpha = .70$), Distancing ($\alpha = .61$), Self-Controlling ($\alpha = .70$), Seeking Social Support ($\alpha = .76$), Accepting Responsibility ($\alpha = .66$), Escape-Avoidance ($\alpha = .72$), Planful Problem-Solving ($\alpha = .68$), and Positive Reappraisal ($\alpha = .79$). Higher scores on each scale indicated greater use of each coping style respectively. For the current study, the Problem-Focused and Emotion-Focused

scales were used. The Cronbach alphas for the Problem-Focused (.79) and Emotion-Focused (.82) were good. See *Appendix I* for a sample of the WOC.

Young Children's Temperament. The *Dimensions of Temperament Scale - Revised for Children* (*DOTS-R Child*; Windle & Lerner, 1986) measured mothers' report of their children's temperament. The DOTS-R Child is a 54-item questionnaire measures nine characteristics of temperament (the Cronbach alphas noted are from Windle & Lerner, 1986): Activity Level-General (α = .84), Activity Level-Sleep (α = .87), Approach-Withdrawal (α = .84), Flexibility-Rigidity (α = .79), Mood Quality (α = .91), Rhythmicity-Sleep (α = .80), Rhythmicity-Eating (α = .80), Rhythmicity-Daily Habits (α = .70), and Task Orientation (α = .79; Windle & Lerner, 1986). As a result, direct comparisons can be made between the DOTS-R Child and the DOTS-R Adult. The DOTS-R Child asks participants to rate items using a four-point Likert scale ranging from *Usually False* (1) to *Usually True* (4). Higher scores on the temperament scales indicated higher activity level; more adaptability or greater tendency to approach new situations, people, or events; greater flexibility in the external environment; greater level of positive quality of mood; more regular sleep patterns; more regular eating habits; more regular daily activities and habits; lower distractibility; and a higher persistence for tasks, respectively. For the current study, the temperament dimensions of Activity Level-General, Approach-Withdrawal, Flexibility-Rigidity, Mood Quality, and Rhythmicity-Daily Habits were used, given that these dimensions have been related closely to the difficult constellation of temperament (e.g., Billman & McDevitt, 1980; Thomas & Chess, 1977). In this study, the Cronbach alphas of Activity Level-General (.87), Approach-Withdrawal (.79), Flexibility-Rigidity (.86), Mood Quality (.88), and Rhythmicity-Daily Habits (.50) were acceptable. See *Appendix J* for a sample of the DOTS-R Child.

Child Maltreatment Potential. The *Child Abuse Potential Inventory* (*CAP*; Milner, 1986, 1994), a screening scale designed to detect the potential for child physical abuse, was used to measure mothers' child maltreatment potential. The CAP is a 160-item self-report questionnaire that asks parents to answer items in a forced-choice, *Agree* or *Disagree,* format. The CAP consists of a 77-item Physical Child Abuse Scale (α = .92 - .96; Milner, 1986), which contains six descriptive factor scales: Distress, Rigidity, Unhappiness, Problems with Child and Self, Problems with Family, and Problems from Others. In addition, the CAP has three validity scales (i.e., a lie scale, a random response scale, and an inconsistency scale) that can derive three response distortion indexes (i.e., the faking-good index, the faking-bad index, and the random response index). Finally, the CAP contains two special scales (i.e., the ego-strength scale and the loneliness scale; Milner, 1988, 1990, 1994). Higher scores on the Physical Child Abuse Scale indicated a higher potential for child maltreatment. For the current study, the Physical Child Abuse Scale was used. The Cronbach alpha of the Physical Child Abuse Scale (.90) was excellent for this study. See *Appendix K* for a sample of the CAP.

CHAPTER THREE: RESULTS

Descriptive Information

In order to put the results of this study into context, descriptive statistics (i.e., means and standard deviations) were examined for each variable of interest. First, with regard to mothers' self-reported temperament (as measured by the DOTS), mothers reported moderate levels of activity level-general (*M*=9.66, *SD*=4.64; as scores were able to range from 0 to 21), moderate levels of rhythmicity-daily habits (*M*=7.46, *SD*=2.94; as scores were able to range from 0 to 15), moderate levels of approach/withdrawal (*M*=11.48, *SD*=4.17; as scores were able to range from 0 to 21), and moderate levels of flexibility/rigidity (*M*=8.72, *SD*=3.52; as scores were able to range from 0 to 15). In contrast, mothers reported relatively high mood quality (*M*=16.59, *SD*=4.34; as scores were able to range from 0 to 21).

In terms of mothers' self-reported emotion and behavior regulation (as measured by the ERQ), mothers reported relatively high levels of cognitive reappraisal (*M*=31.54, *SD*=6.71; as score were able to range from 6 to 42). In contrast, mothers reported moderate levels of expressive suppression (*M*=13.43, *SD*=5.14; as scores were able to range from 4 to 28). Finally, mothers reported moderate levels of emotional dysregulation (as measured by the DERS; *M*=73.80, *SD*=21.05; as scores were able to range from 36 to 180).

For mothers' self-reported parenting stress (as measured by the PSI-4-SF), mothers reported moderate levels of overall parenting stress (*M*=79.10, *SD*=22.97; as the scores were able to range from 36 to 180). In terms of more general stress (as measured by the HS), mothers reported low levels of cumulated severity of stress (*M*=68.60, *SD*=45.72; as the scores were able to range from 0 to 351). In contrast, mothers reported a moderate frequency of stressors (*M*=44.99, *SD*=23.51; as the scores were able to range from 0 to 117) and a moderate intensity of

stress (i.e., cumulated severity divided by frequency; *M*=1.42, *SD*=0.33). With regard to mothers' coping (as measured by the WOC), mothers reported moderate levels of problem-focused coping (*M*=17.04, *SD*=5.47; as the scores were able to range from 0 to 33) and moderate levels of emotion-focused coping (*M*=27.48, *SD*= 10.04; as the scores were able to range from 0 to 72).

In terms of young children's temperament (as measured by the DOTS), mothers reported moderate levels of activity level-general (*M*=13.32, *SD*=4.76; as scores were able to range from 0 to 21), moderate levels of rhythmicity-daily habits (*M*=9.58, *SD*=2.59; as scores were able to range from 0 to 15), moderate levels of approach/withdrawal (*M*=12.34, *SD*=4.19; as scores were able to range from 0 to 21), and moderate flexibility/rigidity (*M*=9.14, *SD*=3.56; as scores were able to range from 0 to 15) for their children. In contrast, mothers reported relatively high mood quality (*M*=18.99, *SD*=3.27; as scores were able to range from 0 to 21) for their children.

Finally, with regard to child maltreatment potential (as measured by the CAP), mothers reported relatively low levels of physical abuse potential (*M* =127.54, *SD* =88.99; as the scores were able to range from 0 to 486). It also should be noted that scores above the critical cut-off score of 166 are classified as "High Maltreatment Potential," whereas scores below 166 are classified as "Low Maltreatment Potential" (Milner, 1986). See Table 2 for the ranges, means, and standard deviations of the independent and dependent variables included in this study.

Preliminary Analyses

Prior to completing the proposed analyses, preliminary analyses were conducted on the variables of interest. In particular, the data was screened for multicollinearity, nonlinear relationships, and differences between groups.

Multicollinearity. Evaluation of multicollinearity revealed that certain variables measuring stress exhibited multicollinearity. In particular, the Variance Inflation Factor (VIF) for the Cumulated Severity, Frequency, and Intensity subscales of the HS were 43.09, 29.04, and 6.10, respectively. These multicollinear relationships were evident due to the fact that each subscale of the HS was composed of the exact same items on the measure but were calculated in different ways. As such, the Frequency and Intensity subscales of the HS were eliminated from further analyses, and the Cumulated Severity of the HS was used in order to best capture the severity of stress experienced by mothers in the sample. All other predictor variables included in the analyses did not exhibit multicollinearity, as the VIF for each was less than 10 (i.e., scores ranged from 1.12 to 2.50), and variance proportions were relatively low (i.e., .50 or less; Field, 2009; Myers, 1990). These analyses left 17 predictor variables to be included in the most complex analysis for this study.

Nonlinear Relationships. Next, curvilinear relationships were assessed between child maltreatment potential and each independent variable. Curve estimations indicated that child maltreatment potential was related in a linear fashion to mothers' temperament, emotion and behavior regulation, stress, coping, and ratings of their young children's temperament.

Multivariate Analysis of Variance (MANOVA). Given the different methods of recruitment utilized for this study (i.e., Amazon Mechanical Turk, Facebook, Craigslist, parenting forums, UCF Community), analyses were conducted in order to determine if there were meaningful differences between groups on the variables of interest. The results of the Multivariate Analysis of Variance (MANOVA) indicated that there were some significant differences between groups. Specifically, Wilk's statistic suggested that there was an overall significant difference among the independent variables (i.e., mothers' temperament, emotion and

behavior regulation, stress and coping, and young children's temperament) and the dependent variable (i.e., child maltreatment potential) based on the recruitment source, $\Lambda = .47$, F (72, 634.84) = 1.55, $p < .004$. In an effort to assess specifically which variables exhibited differences between groups, Scheffe post hoc analyses were conducted. The results of these analyses were presented below.

Although the overall MANOVA revealed significant differences among groups, Scheffe post hoc analyses revealed that only one variable (i.e., expressive suppression) exhibited significant differences between groups. Specifically, mothers who were recruited from Facebook versus Amazon Mechanical Turk differed significantly on their ratings of expressive suppression ($p < .02$). Further, mothers who were recruited from Craigslist versus Amazon Mechanical Turk also differed significantly on their ratings of expressive suppression ($p < .02$). Post hoc analyses did not reveal any other significant differences in the independent or dependent variables based on recruitment source.

Overall, the differences between groups with regard to expressive suppression were considered in terms of contextual factors; however, these differences were not considered in further analyses. Specifically, it was likely that the differences present in expressive suppression were inherent to the individuals sampled (e.g., Facebook users versus Amazon Mechanical Turk users), thus increasing diversity within the sample. In addition, given that a single variable was the main driving force behind the significant MANOVA, we elected not to separate groups for the overall analyses. Finally, given that there were not significant differences between groups on ratings of the dependent variable (child maltreatment potential) and given previous literature suggesting that such variables should not be covaried (e.g., Harris, Bisbee, & Evans, 1971), covariates were not utilized in further analyses.

Correlations

To examine the relationships among mothers' temperament, emotion and behavior regulation, stress, coping, ratings of young children's temperament, and child maltreatment potential, correlations among the variables were examined. Given that the variables did not demonstrate curvilinear relationships, Pearson correlations were examined and provide evidence for the hypotheses regarding the relationships among the aforementioned variables. Several of these relationships were highlighted below. In addition, a Bonferroni correction was completed due to the amount of strong and significant correlations. Given that 153 comparisons were made, the adjusted p-value was .0003268. A complete correlation matrix of these findings was provided in Table 3.

Mothers' temperament and emotion regulation were correlated highly. Specifically, mothers' approach/withdrawal was correlated positively and significantly to cognitive reappraisal (r = .31, p < .001). Further, mothers' approach/withdrawal was correlated negatively and significantly to expressive suppression (r = -.19, p < .02) and to emotion dysregulation (r = -.28, p < .001). Next, mothers' flexibility/rigidity was correlated negatively and significantly to their expressive suppression (r = -.17, p < .03) and to their emotion dysregulation (r = -.41, p < .001). Mothers' mood quality was correlated positively and significantly to their cognitive reappraisal (r = .37, p < .001). In addition, mothers' mood quality was correlated negatively and significantly to their expressive suppression (r = -.29, p < .001) and to their emotion dysregulation (r = -.42, p < .001). Finally, mothers' rhythmicity was related positively and significantly to their cognitive reappraisal (r = .19, p < .019).

Collectively, these results suggested that easy temperament characteristics (i.e., high approach, high flexibility, positive mood quality, and high rhythmicity) were related generally to

high levels of cognitive reappraisal and low levels of expressive suppression and emotion dysregulation. Conversely, difficult temperament characteristics (i.e., high withdrawal, high rigidity, negative mood quality, low rhythmicity) were related generally to high levels of emotion dysregulation and expressive suppression and to low levels of cognitive reappraisal.

Next, with regard to the relationship between mothers' temperament and coping, there were several significant relationships. Specifically, mothers' approach/withdrawal was correlated positively and significantly with their use of problem-focused coping ($r = .26$, $p < .001$). In addition, mothers' flexibility/rigidity was correlated positively and significantly with their use of problem-focused coping ($r = .17$, $p < .04$). Mothers' mood quality also was correlated positively and significantly with their use of problem-focused coping ($r = .33$, $p < .001$). In addition, mothers' rhythmicity-daily habits was correlated positively and significantly with their use of problem-focused coping ($r = .18$ $p < .03$). Overall, easy temperament characteristics were related generally to more effective problem-focused coping, whereas more difficult temperament characteristics were related generally to less use of problem-focused coping.

Next, relationships were examined between mothers' temperament and their young children's temperament. Specifically, mothers' approach/withdrawal was correlated positively and significantly with their young children's approach/withdrawal ($r = .41$, $p < .001$), flexibility/rigidity ($r = .23$, $p < .004$), and rhythmicity ($r = .25$, $p < .002$). Further, mothers' flexibility/rigidity was correlated positively and significantly with their young children's approach withdrawal ($r = .21$, $p < .008$) and flexibility/rigidity ($r = .35$, $p < .001$). Mothers' mood quality was correlated positively and significantly with their young children's approach/withdrawal ($r = .24$, $p < .003$), flexibility/rigidity ($r = .19$, $p < .02$), mood quality ($r = .31$, $p < .001$), and rhythmicity ($r = .26$, $p < .001$). Lastly, mothers' rhythmicity was correlated

positively and significantly with their young children's rhythmicity ($r = .32$, $p < .001$). As a result, mothers' easy temperament characteristics were related to young children's easy temperament characteristics, whereas mothers' difficult temperament characteristics were related to young children's difficult temperament characteristics.

Mothers' temperament also was related highly to child maltreatment potential. Specifically, mothers' approach/withdrawal was correlated negatively and significantly to child maltreatment potential ($r = -.34$, $p < .001$). In addition, mothers' flexibility/rigidity was correlated negatively and significantly to child maltreatment potential ($r = -.33$, $p < .001$). Finally, mothers' mood quality was correlated negatively and significantly to child maltreatment potential ($r = -.53$, $p < .001$). Overall, these results suggested that mothers' more difficult temperament characteristics (i.e., high withdrawal, high rigidity, and negative mood quality) were related to higher child maltreatment potential.

Similarly, several relationships were found between young children's temperament and mothers' child maltreatment potential. For example, young children's activity level was correlated positively and significantly to mothers' child maltreatment potential ($r = .27$, $p < .001$). In addition, young children's approach/withdrawal was correlated negatively and significantly to mothers' child maltreatment potential ($r = -.24$, $p < .002$). Young children's flexibility/rigidity also was correlated negatively and significantly to mothers' child maltreatment potential ($r = -.30$, $p < .001$). In addition, young children's mood quality was correlated negatively and significantly to mothers' child maltreatment potential ($r = -.18$, $p < .02$). Finally, young children's rhythmicity was correlated negatively and significantly to mothers' child maltreatment potential ($r = -.18$, $p < .02$). These results suggested that young children's more difficult temperament characteristics (i.e., high activity level, high withdrawal,

high rigidity, negative mood quality, and low rhythmicity) were related to higher child maltreatment potential.

Next, the relationship between mothers' emotion regulation and coping was examined. In particular, mothers' cognitive reappraisal was correlated positively and significantly with their use of problem-focused coping ($r = .29$, $p < .001$). In contrast, mothers' expressive suppression was correlated negatively and significantly with their use of problem-focused coping ($r = -.17$, $p < .03$). Mothers' use of expressive suppression was correlated positively and significantly to emotion-focused coping ($r = .34$, $p < .001$). Finally, mothers' emotional dysregulation was correlated positively and significantly to emotion-focused coping ($r = .40$, $p < .001$).

Next, the relationship between mothers' emotion and behavior regulation and child maltreatment potential was examined. In particular, mothers' cognitive reappraisal was correlated negatively and significantly to child maltreatment potential ($r = -.30$, $p < .001$). In addition, mothers' expressive suppression was correlated positively and significantly to child maltreatment potential ($r = .21$, $p < .007$). Finally, mothers' emotional dysregulation was correlated positively and significantly to child maltreatment potential ($r = .58$, $p < .001$).

Finally, in terms of the mothers' self-reported stress, these variables demonstrated significant relationships with child maltreatment potential. Specifically, mothers' parenting stress was correlated positively and significantly to child maltreatment potential ($r = .64$, $p < .001$). Similarly, mothers' cumulated severity of stress ($r = .60$, $p < .001$) was correlated positively and significantly to child maltreatment potential. Such results demonstrated that both higher levels of parenting stress and reported daily hassles were related to higher child maltreatment potential.

Hierarchical Regression Analyses

First, hierarchical regression analyses were conducted to determine which variables were significant predictors of child maltreatment potential within the overall model. In these analyses, mothers' temperament, emotion and behavior regulation, stress, coping, and ratings of young children's temperament served as predictor variables, and child maltreatment potential served as the criterion variable (as noted earlier). Specifically, mothers' temperament variables were entered into Block 1, emotion and behavior regulation variables were entered into Block 2, stress variables were entered into Block 3, coping variables were entered into Block 4, and young children's temperament variables were entered into Block 5 so that incremental variance could be examined. See Table 4 for a summary of these results.

In Block 1, mothers' temperament predicted significantly their child maltreatment potential, F (5, 151) =13.91, $p < .001$, $R^2 = .32$. Specifically, mothers' flexibility/rigidity ($p < .04$) and mood quality ($p < .001$) served as significant individual predictors of child maltreatment potential. When mothers' emotion and behavior regulation was entered into Block 2, the regression equation remained significant, F (8, 148) =14.75, $p < .001$, $R^2 = .44$. Within this block, mothers' mood quality ($p < .001$) again served as a significant individual predictor, and mothers' emotional dysregulation ($p < .001$) emerged as a significant predictor. Mothers' flexibility/rigidity no longer served as a significant predictor of child maltreatment potential when emotion and behavior regulation was added to the regression equation.

When stress variables were entered into Block 3, the regression equation remained significant, F (10, 146) = 24.07, $p < .001$, $R^2 = .62$. In particular, mothers' mood quality ($p < .001$) remained a significant individual predictor, and parenting stress ($p < .001$) and cumulated severity of stress ($p < .001$) served as significant individual predictors. Next, when coping

variables were entered into Block 4, the regression equation remained significant, F (12, 144) =21.58, $p < .001$, $R^2 = .64$. Specifically, mothers' mood quality ($p < .001$), parenting stress ($p < .001$), and cumulated severity of stress ($p < .001$) all continued to serve as significant individual predictors of child maltreatment potential. Emotion-focused coping also emerged as a significant individual predictor ($p < .007$). Finally, when young children's temperament variables were entered into Block 5, the regression equation remained significant, F (17, 139) =16.63, $p < .001$, $R^2 = .67$. Specifically, mothers' mood quality ($p < .001$), parenting stress ($p < .001$), cumulated severity of stress ($p < .001$), and emotion-focused coping ($p < .02$) all continued to serve as significant individual predictors of child maltreatment potential. In addition, young children's mood quality ($p < .01$) emerged as a significant individual predictor of child maltreatment potential.

Mediation Analyses

Given the results of the hierarchical regression analyses, certain variables emerged as significant individual predictors that required additional examination. As a result, mediation analyses were conducted in order to test the hypothesis that emotion and behavior regulation would serve as a mediator in the relationship between mothers' temperament and child maltreatment potential. Specifically, flexibility/rigidity was used as mothers' temperament variable given that it was no longer a significant predictor of child maltreatment potential after the emotion and behavior regulation variables were added to the regression equation. Given that mood quality remained a significant predictor even after the emotion and behavior regulation variables were added, this temperament variable was not considered in mediational analyses. With regard to selecting an emotion and behavior regulation variable for these analyses, emotion dysregulation was used, given that it emerged as a significant individual predictor in the

hierarchical regression equation (whereas cognitive reappraisal and expressive suppression did not).

According to Baron and Kenny's procedure (1986), a series of regression equations was performed. First, mothers' temperament (i.e., flexibility/rigidity) had to predict their emotion and behavior regulation abilities (i.e., emotion dysregulation; path a) as well as their child maltreatment potential (path b). In an additional regression equation, mothers' emotion and behavior regulation must predict child maltreatment potential (path c). With the inclusion of mothers' emotion and behavior regulation in the final regression equation, the relationship between mothers' temperament and child maltreatment potential must decrease to non-significance, indicating the mediational role of mothers' emotion and behavior regulation.

Mothers' Temperament Predicting Emotion and Behavior Regulation. When examining the mediational role that emotion and behavior regulation abilities play in the relationship between mothers' temperament and child maltreatment potential, the first regression equation revealed that mothers' flexibility/rigidity predicted their emotion dysregulation significantly, F (1,156) =31.82, $p < .001$, $R^2 = .17$.

Mothers' Temperament Predicting Child Maltreatment Potential. The second regression equation revealed that mothers' flexibility/rigidity predicted their child maltreatment potential significantly, F (1, 155) =18.46, $p < .001$, $R^2 = .11$.

Mother's Emotion and Behavior Regulation Predicting Child Maltreatment Potential. The third regression equation revealed that mothers' emotion dysregulation predicted their child maltreatment potential significantly, F (1, 155) =78.01, $p < .001$, $R^2 = .34$.

Mothers' Temperament and Emotion and Behavior Regulation Abilities Predicting Child Maltreatment Potential. Finally, mothers' flexibility/rigidity and emotion dysregulation

predicted significantly their child maltreatment potential, F (2, 154)=40.38, $p < .001$, $R^2 = .34$. In particular, when entered individually, mothers' flexibility/rigidity predicted significantly their child maltreatment potential ($p < .001$). When mothers' emotion dysregulation was added to this equation, however, flexibility/rigidity decreased in significance ($p < .14$), and only mothers' emotion dysregulation was a significant predictor of child maltreatment potential ($p < .001$). Thus, mothers' ratings of their emotion dysregulation mediated the relationship between their ratings of flexibility/rigidity and child maltreatment potential. The mediational value of emotion dysregulation was confirmed with a significant Sobel Test ($z = -4.75$, $p < .001$). These results were presented in Table 5.

CHAPTER FOUR: DISCUSSION

The overall objective of the current study was to provide a deeper understanding of the importance of several variables implicated in the prediction of child maltreatment potential. In conjunction with this purpose, the current study also aimed to enhance and clarify existing transactional theories of child maltreatment. Overall, previous literature demonstrated that parents with more difficult temperament characteristics were more likely to perpetrate child maltreatment (Casanueva et al., 2010; Latzman et al., 2009; Stith et al., 2009), parents with difficult temperament characteristics had more difficulty regulating their emotions (Rothbart & Sheese, 2007; Saarni, 2006), and maltreating parents had more difficulty regulating their emotions (Ammerman, 1990; Cantos et al., 1997; Robinson et al., 2009). Because previous research demonstrated relationships between each of the variables independently, it was important to examine parent temperament and emotion and behavior regulation along with stress, coping, and young children's temperament collectively in an attempt to better predict child maltreatment potential. In particular, we sought to demonstrate the importance of emotion and behavior regulation as one potential process involved in the chain that leads from difficult temperament in mothers to a higher likelihood of child maltreatment potential. Additionally, given the emerging prominence of emotion regulation in the research and treatment literature today, this study addresses a gap in the current literature and in existing predictive models of child maltreatment.

Overall, the correlational findings supported the hypotheses that mothers' temperament, emotion and behavior regulation, stress, coping, and ratings of their young children's temperament were interrelated and thus important to examine collectively as predictors of child maltreatment potential. Specifically, mothers' difficult temperament was associated positively

and significantly with more difficulties in emotion and behavior regulation as well as with higher child maltreatment potential. Additionally, in partial support of the hypotheses, mothers' difficult temperament was related negatively and significantly to the effective use of problem-focused coping; however, mothers' temperament did not demonstrate a significant relationship with emotion-focused coping. In support of the hypotheses regarding the relationship between mothers' and young children's temperament, mothers' temperament was related significantly and positively to their reports of their young children's temperament. In conjunction with this finding, young children's difficult temperament characteristics were related positively and significantly to mothers' child maltreatment potential.

Emotion and behavior regulation also demonstrated strong relationships with many of the variables of interest. As noted previously, mothers' difficult temperament (i.e., higher withdrawal, more negative quality of mood, and higher rigidity) was related to emotion dysregulation. Although temperament and emotion regulation were theorized as being related (Saarni, 206; Strelau, 1983, 2008), the current study provided empirical evidence of the relationship between these two constructs. Similar to previous research (Ammerman, 1990; Cantos et al., 1997; Spinetta, 1978) and also of particular importance to the current study was the finding that having more difficulties with emotion and behavior regulation was related positively and significantly to higher child maltreatment potential. Not surprisingly (and in support of the hypotheses for this study), mothers' emotion dysregulation was related to higher child maltreatment potential. This finding suggested that individuals who have trouble organizing their own feelings or down-regulating their negative reactions to aversive stimuli (e.g., difficult characteristics in young children, daily hassles) were at higher risk for child maltreatment potential.

With regard to specific emotion regulation techniques used by mothers, higher cognitive reappraisal was related to lower child maltreatment potential, whereas higher expressive suppression was related to higher child maltreatment potential. These findings made sense, however, given what is known about the positive psychological effects of cognitive reappraisal versus the negative outcomes of expressive suppression as an emotion regulation strategy, particularly in interpersonal situations (Butler, Egloff, Wlhelm, Smith, Erickson, & Gross, 2003; Butler & Gross, 2004; Haga, Kraft, & Corby, 2009; Soto, Perez, Kim, Lee, & Minnick, 2011). In addition, because expressive suppression occurred late in the chain that led from stimulus to observable behavior (Geisler, & Schröder-Abé, In Press), it could be equated to what was called "behavior regulation" in this study (whereas cognitive reappraisal was tied more closely to what would be deemed true "emotion regulation"). It was likely that, once individuals had experienced negative emotional reactions that were not down-regulated effectively through the use of cognitive reappraisal, expressive suppression would not always be adequate to prevent maladaptive behavior (i.e., child maltreatment) from occurring. In general, it appeared that, when predicting child maltreatment potential, it was not the amount or degree of emotion or behavior regulation that was employed, but rather the type of strategy that was employed or whether the individual was experiencing overall high levels of emotion dysregulation.

Several interesting findings were noted with regard to the relationships between emotion and behavior regulation and mothers' self-reported coping strategies, possibly due to the similarities between these two concepts and definitional inconsistencies noted previously (Gross, 1998; Gross & Thompson, 2007). Specifically, in support of the hypotheses presented, mothers' use of cognitive reappraisal as an emotion regulation strategy was related positively and significantly to their use of problem-focused coping, whereas their use of expressive suppression

as well as their emotion dysregulation was related negatively and significantly to their use of problem-focused coping. In contrast to the hypothesis regarding emotion regulation and coping, mothers' emotion dysregulation was related positively and significantly to their use of emotion-focused coping. Upon closer examination, however, it was evident that many of the items included in the emotion-focused coping subscale of the WOC involved distancing/avoidant behaviors that were used to cope with stress. Given what was known about the long-term ineffectiveness and unfavorable outcomes of avoidant coping (e.g., Aldao & Nolen-Hoeksema, 2010, 2012; Amstadter & Vernon, 2008; Cantos et al., 1997; Roth & Cohen, 1986), it was understandable that the emotion-focused subscale was in fact correlated positively with overall emotion dysregulation. Similarly, it was no surprise that expressive suppression was correlated positively with emotion-focused coping, given that the expressive suppression subscale of the ERQ, in essence, described the moment-to-moment behavioral manifestation of distancing/avoidant coping strategies. This finding was similar to previous literature suggesting that suppression was one aspect of avoidant coping (Leen-Feldner, Zvolensky, Feldner, & Lejuez, 2004).

When considering the cumulative and individual predictive validity of each independent variable, the hierarchical regression analyses shed light on the importance of mothers' temperament, emotion and behavior regulation, stress and coping, and ratings of young children's temperament in the prediction of child maltreatment potential. The results suggested that several specific variables of interest (i.e., mothers' mood quality, flexibility/rigidity, emotion dysregulation, parenting stress, cumulated severity of stress, emotion-focused coping, and ratings of young children's mood quality) emerged as significant predictors of child maltreatment potential. Given that these variables added unique incremental variance to the prediction of child

maltreatment potential, this study added to the existing literature regarding transactional theories of child maltreatment prediction by informing the selection of potential mediators to examine within these relationships after deciphering these results. These findings were particularly noteworthy, given the amount of variance in child maltreatment potential explained by the predictors of interest. Specifically, the R^2 for the overall model was .67. This large value demonstrated the strong predictive value of the independent variables when they were examined collectively in a transactional model to predict child maltreatment potential.

These findings were in stark comparison to those of previous literature suggesting that a cumulative risk model (calculated by summing the occurrence of risk factors present) predicted child maltreatment potential better than a developmental-ecological (i.e., transactional) model of child maltreatment (Begle et al., 2010). In order to clarify the distinction and predictive validity of cumulative risk models versus transactional models, Begle and colleagues (2010) examined their data for both models. Specifically, for the cumulative risk model, cutoff scores were utilized in order to determine whether each risk factor was present or not. In contrast, structural equation modeling was used to examine the transactional model. Results suggested that the cumulative risk model fit the prediction of child maltreatment better than the transactional model; however, the cumulative risk model predicted only up to 28% of the variance in child maltreatment potential. In other words, that value was much lower than that of the current study, which accounted for up to 67% of the variance in child maltreatment potential by utilizing a transactional model of prediction.

Similar to our own framework, Mackenzie and colleagues (2011) found that a cumulative risk model predicted child maltreatment significantly better than any one single risk factor could alone. Nonetheless, the complexity of the interactions among parents, children, and their

environmental context clearly must not be ignored or reduced to a simple sum of the risk factors present. Thus, we hold that transactional theories of child maltreatment (e.g., Belsky, 1980, 1981, 1993; Cicchetti & Rizley, 1981) made not only theoretical sense but remained superior and demonstrated stronger empirical support in the prediction of child maltreatment.

Interestingly, the mood quality dimension of temperament predicted child maltreatment potential significantly, but not necessarily in the context of emotion and behavior regulation. In the hierarchical regression analyses, mood quality remained significant, even after emotion and behavior regulation strategies and coping were added to the equation. In other words, the deleterious effects of negative mood quality on child maltreatment potential were not attenuated by emotion and behavior regulation abilities. Thus, it appeared as though there was something unique about mood quality, particularly given that the mood quality subscale of the DOTS measures an innate trait or general characteristic of parents and thus remains untouched by more state-dependent or moment-to-moment emotion or behavior regulation skills such as cognitive reappraisal or expressive suppression. Again, research regarding parent temperament in the context of child maltreatment potential was scant. This finding was consistent, however, with previous research suggesting that depressive symptoms predicted child maltreatment (Kelley, Lawrence, Milletich, Hollis, & Henson, in press). As such, more research is needed to identify paths leading from negative mood quality to higher child maltreatment potential so that interventions can be tailored for mothers who rate highly on this risk factor.

Another noteworthy finding of the current study was the fact that parenting stress and daily hassles remained significant predictors of child maltreatment potential even after coping was added to the predictive equation. These results were in contrast to the hypotheses that stress would interact with other variables of interest (i.e., mother temperament, emotion regulation,

coping) to clarify existing transactional theories of child maltreatment prediction. Instead, the findings were consistent with previous research suggesting that stress was predictive of child maltreatment potential (Begle, 2010; Rodriguez & Green, 1997) regardless of resilience factors such as use of social support (Östberg, & Hagekull, 2000). Surprisingly, however, few researchers have examined many other protective factors in the relationship between stress experienced by mothers (whether that be parenting stress or daily hassles) and their subsequent child maltreatment potential. As such, our findings highlighted the strong influence that stress had on the prediction of child maltreatment potential and expanded the existing literature by demonstrating that coping did not necessarily decrease this influence. Future research will need to determine whether any other potential protective factors may divert stress from resulting in higher child maltreatment potential.

Finally, more detailed relationships among some of the variables in the hierarchical regression were examined. In particular, given that flexibility/rigidity no longer remained a significant predictor of child maltreatment when emotion dysregulation was added to the hierarchical regression analysis, these variables were selected for further examination. Mediation analyses indicated that emotion dysregulation mediated the relationship between mothers' flexibility/rigidity temperament characteristics and their child maltreatment potential. Such findings demonstrated how dysregulated, highly rigid individuals may become when their routines, environments, or interactions were not as expected or preferred and how this resulting dysregulation may increase the risk for child maltreatment potential.

Although previous researchers noted that the construct of temperament applies throughout the lifespan (Rothbart & Posner, 2006; Rothbart & Sheese, 2007, Rothbart, Sheese, & Posner, 2014), not much research focused previously on adult temperament. As a result, not

much was known about how flexibility/rigidity was related particularly to emotion dysregulation. This mediation demonstrated, however, that difficult mother temperament might not be inherently problematic. Similar to previous research, the current study suggested that temperament laid the groundwork for the development of emotion regulation skills (Rothbart & Sheese, 2007; Saarni, 2006; Thompson, 1994). It was these emotion regulation skills that then served to help or hinder parents who demonstrated characteristics of a difficult temperament. Overall, these results emphasized the importance of conceptualizing child maltreatment potential as a transactional process. This point was exceptionally important, given that it may allow scientist practitioners to define a point of intervention in an effort to prevent and address child maltreatment.

The findings of this study should be interpreted within the context of its limitations. For example, although both mothers and fathers participated in the study, the number of participating mothers was disproportionate to the number of participating fathers. Thus, not enough males provided information for meaningful data analyses of male versus female differences in this data set, and only mothers were utilized in the analyses as a result. A larger sample of fathers may provide insight as to whether emotion and behavior regulation abilities also serve as a mediator between temperament and child maltreatment potential for fathers or whether a different set of factors would be more important in the prediction of fathers' child maltreatment potential. With regard to the mothers who participated in the current study, the sample was somewhat homogenous despite being collected from a national community population. In particular, the majority of mothers was Caucasian, had completed at least some college, and had a yearly household income of over $70,000 per year. In addition, the study used a community sample,

and the rates of child maltreatment potential in this sample were likely not as high as they would be in more typically "high-risk" populations (Whipple & Webster-Stratton, 1991).

As a result, future research should examine temperament, emotion regulation, stress, and coping as predictors of child maltreatment potential for other samples, including those who have been identified previously as perpetrating child maltreatment, those who have been victims of child maltreatment in their own histories, parents in low socioeconomic status groups, parents who have mental illness, and/or parents who use or have abused substances or alcohol. More generally, self-report ratings such as those utilized for the current study should not be assumed to be completely accurate, given that participants possibly may have responded in a socially desirable manner. Accordingly, observational research or multi-informant ratings may provide more accurate measures of the variables of interest, particularly for parent and child temperament. Nonetheless, this type of research presents its own difficulties and drawbacks. In addition, data for this study were collected online without observation from researchers. These factors may decrease external validity, decreasing the generalizability of this study's results. Nonetheless, measures were taken to reduce the likelihood of including participants who responded randomly or without effort (e.g., including validity questions and eliminating those who answered them incorrectly).

Despite these limitations, the results of this study expanded the body of literature regarding the prediction of child maltreatment. For example, researchers examined previously the emotion and behavior regulation abilities of maltreating mothers (e.g., Ammerman, 1990; Cantos et al., 1997; Frodi & Lamb, 1980; Robinson et al., 2009). The current study takes a different angle, instead examining temperament and emotion dysregulation as predictors of child maltreatment potential (via the CAP, a widely used and validated risk instrument) in a national

community sample rather than as characteristics of parents who already perpetrated maltreatment. These findings will allow providers to identify mothers who may be at-risk based on such characteristics and then target prevention efforts. Specifically, given the genetic underpinnings of temperament (e.g., Cyphers et al., 1990; Oniszcenko et al., 2003; Zawadzki et al., 2001), it is unlikely that interventions will succeed in altering mothers' levels of innate behavioral style, including characteristics such as level of flexibility/rigidity and mood quality. Given that emotion dysregulation mediated the relationship between mothers' flexibility/rigidity and child maltreatment potential, however, targeting emotion regulation skills in prevention and intervention programs for at-risk mothers likely will be extremely beneficial. Clearly future research will benefit from examining the positive effects of including emotion regulation skills training as a component of child maltreatment prevention and intervention. With these findings, better intervention and prevention efforts can be targeted and tailored for parents who have difficult temperaments or difficulties regulating their emotions, thereby decreasing their child maltreatment potential.

Table 1. **Participant Demographic Information**

Variables	**(N=158)**
Mother Age **(in years)**	
Mean (Standard Deviation)	32.28 (6.19)
Child Age **(in years)**	
Mean (Standard Deviation)	2.99 (1.23)
Child Gender **(percent)**	
Male	50.0%
Female	49.4%
Other	0.6%
Recruitment Source **(percent)**	
Amazon Mechanical Turk	62.0%
Craigslist	12.7%
Facebook	11.4%
UCF Community	9.5%
Online Parenting Communities	4.4%
Ethnicity **(percent)**	
Caucasian	81.0%
African American	8.2%
Hispanic	3.8%
Asian American	3.8%
Other races not listed	1.9%
Multiracial	1.3%
Socioeconomic Status **(percent)**	
<$10,000	3.2%
$10,000-$20,000	5.7%
$20,000-$30,000	10.8%
$30,000-$40,000	12.7%
$40,000-$50,000	12.7%
$50,000-$60,000	15.9%
$60,000-$70,000	8.9%
>$70,000	29.7%
Education Level **(percent)**	
High School Diploma	6.3%
Vocational Training	3.2%
Some College	37.3%
Bachelor's Degree	34.2%
Graduate/Professional Training	15.8%
Doctoral Degree	3.2%

Variables	**(N=158)**
Marital Status **(percent)**	
Single	9.5%
Living with Partner	15.2%
Married	65.2%
Separated	1.9%
Divorced	6.3%
Remarried	1.3%
Widowed	0.6%

Table 2. **Descriptive Statistics for Variables of Interest**

Variables (Available Range)	***M***	***SD***	***Actual Range***
Mothers' Temperament			
Activity Level-General (0-21)	9.66	4.64	(0-21)
Approach/Withdrawal (0-21)	11.48	4.17	(0-21)
Flexibility/Rigidity (0-15)	8.72	3.52	(0-15)
Mood Quality (0-21)	16.59	4.34	(0-21)
Rhythmicity-Daily Habits (0-15)	7.46	2.94	(1-13)
Parent Emotion and Behavior Regulation			
Cognitive Reappraisal (6-42)	31.54	6.71	(6-42)
Expressive Suppression (4-28)	13.43	5.14	(4-27)
Difficulties with Emotion Regulation (36-180)	73.80	21.05	(36-143)
Stress			
Parenting Stress (36-180)	79.10	22.97	(37-150)
Cumulated Severity (0-351)	68.50	45.72	(0-237)
Frequency (0-117)	44.99	23.51	(0-113)
Intensity (0-3)	1.42	0.33	(0-2.42)
Coping			
Problem-Focused Coping (0-33)	17.04	5.47	(2-30)
Emotion-Focused Coping (0-72)	27.48	10.04	(4-53)
Young Children's Temperament			
Activity Level-General (0-21)	13.32	4.76	(1-21)
Approach/Withdrawal (0-21)	12.34	4.19	(1-21)
Flexibility/Rigidity (0-15)	9.14	3.56	(0-15)
Mood Quality (0-21)	18.99	3.27	(6-21)
Rhythmicity-Daily Habits (0-15)	9.58	2.59	(1-15)
Child Maltreatment Potential			
Physical Abuse Potential (0-486)	127.54	88.99	(5-414)

Table 3. **Correlations Among Mother and Young Child Temperament, Emotion and Behavior Regulation, Stress and Coping, and Child Maltreatment Potential**

Variables	1	2	3	4	5	6	7	8	9
1. Mother Activity Level-General	-								
2. Mother Approach/Withdrawal	.09	-							
3. Mother Flexibility/Rigidity	-.11	**.58*** **	-						
4. Mother Mood Quality	.19*	**.45*** **	**.29*** **	-					
5. Mother Rhythmicity-Daily Habits	-.06	.15	-.05	**.29*** **	-				
6. Cognitive Reappraisal	.14	**.31*** **	.11	**.37*** **	.19*	-			
7. Expressive Suppression	.06	-.19*	-.17*	**-.29*** **	-.08	.01	-		
8. Emotion Dysregulation	.01	**-.28*** **	**-.41*** **	**-.42*** **	-.13	**-.29*** **	.20*	-	
9. Parenting Stress	-.05	-.27***	-.20*	**-.40*** **	-.11	-.25***	.17*	**.51*** **	-

Variables	1	2	3	4	5	6	7	8	9
10. Cumulated Severity of Stress	.12	-.09	-.15	-.23**	-.04	-.08	.20**	**.47*** **	**.53*** **
11. Problem-Focused Coping	.14	.26***	.17*	**.33*** **	.18*	**.29*** **	-.17*	-.14	-.08
12. Emotion-Focused Coping	.13	.06	-.05	-.07	.10	.07	**.34*** **	**.40*** **	**.30*** **
13. Child Activity Level-General	.15	-.12	-.01	-.01	-.13	.04	-.04	.14	**.31*** **
14. Child Approach/Withdrawal	.06	**.41*** **	.21**	.24**	.14	.22**	-.15	-.18*	**-.32*** **
15. Child Flexibility/Rigidity	-.03	.23**	**.35*** **	.19*	.07	.17*	-.09	**-.30*** **	**-.37*** **
16. Child Mood Quality	.15	.14	.08	**.31*** **	.09	**.30*** **	-.10	-.22**	**-.41*** **
17. Child Rhythmicity-Daily Habits	.06	.25**	-.01	.26***	**.32*** **	.26***	-.05	-.06	-.26***
18. Child Maltreatment Potential	-.07	**-.34*** **	**-.33*** **	**-.53*** **	-.15	**-.30*** **	.21**	**.58*** **	.**64****

Variables	10	11	12	13	14	15	16	17	18
10. Cumulated Severity of Stress	-								
11. Problem-Focused Coping	.19*	-							
12. Emotion-Focused Coping	**.54*** **	**.30*** **	-						
13. Child Activity Level-General	.19*	.11	.14	-					
14. Child Approach/Withdrawal	-.21**	.16	-.06	.08	-				
15. Child Flexibility/Rigidity	-.21**	.06	-.11	-.10	**.49*** **	-			
16. Child Mood Quality	-.24**	.18*	-.01	.09	**.28*** **	.24**	-		
17. Child Rhythmicity-Daily Habits	-.20*	.12	.06	.08	**.27*** **	.08	**.31*** **	-	
18. Child Maltreatment Potential	**.60*** **	-.06	**.42*** **	.27***	-.24**	**-.30*** **	-.18*	-.18*	-

Note. * $p < .05$ ** $p < .01$ *** $p < .001$; Items in bold are significant after Bonferonni Correction.

Table 4. **Hierarchical Regression Analyses Predicting Child Maltreatment Potential**

Variables	***B***	**SE *B***	***β***
Block 1. F (5, 151) =13.91, $p < .001$, $R^2 = .32$			
Mother Activity Level-General	.01	1.37	.00
Mother Approach/Withdrawal	-.62	1.92	-.03
Mother Flexibility/Rigidity	-4.46	2.19	-.18*
Mother Mood Quality	-9.44	1.63	-.46***
Mother Rhythmicity-Daily Habits	-.54	2.19	-.02
Block 2. F (8, 148) =14.75, $p < .001$, $R^2 = .44$			
Mother Activity Level-General	-.22	1.26	-.01
Mother Approach/Withdrawal	-1.20	1.80	-.06
Mother Flexibility/Rigidity	-.71	2.13	-.03
Mother Mood Quality	-6.21	1.64	-.30***
Mother Rhythmicity-Daily Habits	.47	2.01	.02
Cognitive Reappraisal	-.62	.93	-.05
Expressive Suppression	.51	1.13	.03
Emotion Dysregulation	1.72	.31	.41***
Block 3. F (10, 146) =24.07, $p < .001$, $R^2 = .62$			
Mother Activity Level-General	-1.10	1.06	-.06
Mother Approach/Withdrawal	-.66	1.50	-.03
Mother Flexibility/Rigidity	-2.24	1.78	-.09
Mother Mood Quality	-4.53	1.38	-.22***
Mother Rhythmicity-Daily Habits	-.54	1.67	-.02
Cognitive Reappraisal	-.71	.77	-.05
Expressive Suppression	-.15	.95	-.01
Emotion Dysregulation	.57	.30	.14
Parenting Stress	.98	.26	.25***
Cumulated Severity of Stress	.66	.13	.34***

Variables	***B***	**SE *B***	***β***
Block 4. F (12, 144) =21.58, $p < .001$, $R^2 = .64$			
Mother Activity Level-General	-1.28	1.04	-.07
Mother Approach/Withdrawal	-.94	1.48	-.04
Mother Flexibility/Rigidity	-.28	1.75	-.11
Mother Mood Quality	-4.77	1.37	-.23***
Mother Rhythmicity-Daily Habits	-1.35	1.66	-.05
Cognitive Reappraisal	-.93	.77	-.07
Expressive Suppression	-1.01	1.00	-.06
Emotion Dysregulation	.32	.31	.08
Parenting Stress	.99	.26	.25***
Cumulated Severity of Stress	.52	.14	.27***
Problem-Focused Coping	-.10	.99	-.01
Emotion-Focused Coping	1.70	.62	.19**
Block 5. F (17, 139) =16.63, $p < .001$, $R^2 = .67$			
Mother Activity Level-General	-1.80	1.03	-.09
Mother Approach/Withdrawal	-.28	1.61	-.01
Mother Flexibility/Rigidity	-3.05	1.83	-.12
Mother Mood Quality	-5.25	1.35	-.26***
Mother Rhythmicity-Daily Habits	-.98	1.70	-.03
Cognitive Reappraisal	-1.44	.77	-.11
Expressive Suppression	-.65	.99	-.04
Emotion Dysregulation	.25	.30	.06
Parenting Stress	1.04	.28	.27***
Cumulated Severity of Stress	.56	.14	.29***
Problem-Focused Coping	-.38	.97	-.02
Emotion-Focused Coping	1.50	.61	.17*
Young Child Activity Level-General	1.68	1.09	.09
Young Child Approach/Withdrawal	.29	1.38	.01
Young Child Flexibility/Rigidity	-.67	1.55	-.03
Young Child Mood Quality	4.12	1.60	.15*
Young Child Rhythmicity-Daily Habits	-.13	2.02	-.00

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 5. **Mediational Regression Analyses for Child Maltreatment Potential**

Regression/Variables	***β***	***t***	***p***
Mediators: Emotion Dysregulation			
Flexibility/Rigidity and Emotion Dysregulation: F (1,156) =31.82, $p < .001$, $R^2 = .17$			
Flexibility/Rigidity	-.41	-5.64	.001***
Emotion Dysregulation and Child Maltreatment Potential: F (1,155) =78.01, $p < .001$, $R^2 = .34$			
Emotion Dysregulation	.58	8.83	.001***
Flexibility/Rigidity and Child Maltreatment Potential: F (1, 155) =18.46, $p < .001$, $R^2 = .11$			
Flexibility/Rigidity	-.33	-4.30	.001***
Flexibility/Rigidity, Emotion Dysregulation, and Child Maltreatment Potential: F (2, 154) =40.38, $p < .001$, $R^2 = .34$			
Flexibility/Rigidity	-.11	-1.47	.144
Emotion Dysregulation	.54	7.47	.001***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX A: EXPLANATION OF RESEARCH FORM

Appendix A: Explanation of Research Form

A Closer Look at the Interactions Among Parent and Child Temperament, Stress and Coping, Emotional and Behavioral Regulation, and Parenting Behaviors

Informed Consent

Principal Investigator: Amanda Lowell, B.S.

Faculty Supervisor: Kimberly Renk, Ph.D.

Investigational Site: University of Central Florida, Department of Psychology

Introduction: Researchers at the University of Central Florida (UCF) study many topics. To do this, we need the help of people who agree to take part in a research study. You are being invited to take part in a research study, which will include up to 257 parents from the United States. You must be 18-years of age or older, and have a child between the ages of 1.5- to 5-years of age to be included in the research study.

The persons doing this research include Amanda Lowell, B.S., a Graduate Student in the Clinical Psychology Ph.D. Program at the University of Central Florida, and Kimberly Renk, Ph.D., an Associate Professor of Psychology at UCF.

What you should know about a research study:

- Someone will explain this research study to you.
- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

Purpose of the research study: The purpose of this research study is to examine the relationships among temperament, emotional and behavioral functioning, and emotional and behavioral regulation abilities in parents; stress and coping; previous exposure to adverse childhood experiences; and temperament, emotional and behavioral functioning in young children, with particular emphasis on understanding which of these characteristics predict the ways in which individuals parent their children. In fact, previous research indicated that children with difficult temperaments are exposed to harsher parenting practices than children with easier

temperaments. Further, parents with difficult temperaments and difficulty regulating their emotions have been shown to exhibit harsher parenting. High levels of stress and difficulties coping are also related to poorer parenting practices. Finally, previous adverse childhood experiences may affect parenting behaviors, as well. However, little is known about the combination of child temperament, parent temperament, emotional and behavioral regulation, stress and coping, and previous exposure to adverse experiences as intervening factors in predicting different levels of functioning, particularly with regard to later parenting behaviors. As a result, there is a need to further examine the interrelationships among these variables.

What you will be asked to do in the study: As part of this study, you will be asked to complete ten brief questionnaires that will take approximately one hour of your time. Sona Systems provides a link to the surveys. Alternatively, you will be able to complete a hard copy if you are unable to access the study online. Your responses as part of this study will be used to examine the relationships among child temperament, parent temperament, emotional and behavioral regulation, stress and coping, and childhood experiences in the context of parent-child interactions, and later parenting behaviors.

Location: Research for this project will be conducted in one of two methods in a location of your choice. You may choose to fill out the questionnaires either on a secure online survey site or by hard copy to be returned via postal mail. If you complete the hard copy of questionnaires, you will be returning these questionnaires to the principal investigators upon completion via a postage paid envelope included in the packet.
Time Required: We expect that you will participate in this research study for approximately one hour.

Risks: Although there are no anticipated risks that accompany your participation in this research study, it should be noted that some of the questionnaires that you will complete may bring up negative or unpleasant experiences from your childhood. Should you have a negative emotional reaction to any of the material presented, please notify the investigators or the faculty investigator listed on this form. In addition, you should consider obtaining counseling assistance or psychological treatment if such help is needed as a result of participation in the study. For help obtaining such services near you, you may wish to consult your insurance provider or contact your general practitioner for a referral. In addition, you may visit the American Psychological Association website at http://locator.apa.org/ to find a psychologist near you. If you are located in the Central Florida area, you may wish to contact the UCF Psychology Clinic at 407-823-4348.

Benefits: One benefit of participating in this project is that you will learn first-hand what it is like to participate in a research project and you may learn more about yourself. For example, by completing the questionnaire packet, you will increase your awareness of your child's temperament, as well as your own temperament, emotional and behavioral regulation abilities, emotional and behavioral functioning, stress, coping, and childhood experiences.

Compensation or Payment: Participants can expect to spend approximately one hour completing ten questionnaires and will not receive payment. Nonetheless, if you are a UCF

student, you may receive extra credit toward a Psychology course of their choice through Sona Systems.

Confidentiality: We will limit your personal data collected in this study to people who have a need to review this information. This only includes basic demographic information. No names and identifying information will be collected. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of UCF. You can be assured that we will not be able to link your identity to your responses, however, as we will not be asking you for your name as part of this consent process. Upon completion of the online surveys, your responses will be linked with an identification number only. The principal investigators will then transfer your survey responses from the secure online server to an SPSS database that only the investigators will be able to access via a password protected computer. Your online survey responses then will be deleted from the secure online server. Thus, your responses will be entirely anonymous. If you elect to complete a paper packet, your completed packet will be stored in a locked filing cabinet in a locked psychology laboratory in the Psychology Building at the University of Central Florida. Only research team members will handle your surveys. The completed packets will be entered into a database using a research identification number only.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints or think the research has hurt you, talk to Kimberly Renk, Ph.D., Faculty Supervisor, Department of Psychology, at 407-823-2218 or by email at Kimberly.Renk@.ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

Withdrawing from the study: There are no adverse consequences for choosing to withdraw from your participation in the study. The person in charge of the research study or the sponsor can remove you from the research study without your approval if you are not 18-years of age or older.

If you agree to participate in this research study, please click continue below.

APPENDIX B: POST PARTICIPATION INFORMATION

Appendix B: Post Participation Information

PROJECT: A Closer Look at the Interactions Among Parent and Child Temperament, Stress and Coping, Emotional and Behavioral Regulation, and Parenting Behaviors
INVESTIGATORS: Kimberly Renk, Ph.D., & Amanda Lowell, B.S.

Thank you for participating in this research project. This project is being conducted so that we may find out more about the relationships among temperament, emotional and behavioral functioning, and emotional and behavioral regulation abilities in parents; stress and coping; previous exposure to adverse childhood experiences; and temperament, emotional and behavioral functioning in young children, with particular emphasis on understanding which of these characteristics predict the ways in which individuals parent their children. As part of your participation, you completed several questionnaires inquiring about your temperament, your ability to regulate your emotions and your behaviors, your perceived parenting stress and daily hassles, your coping styles, your child's temperament, your current emotional and behavioral functioning, your parenting behaviors, and your childhood experiences (particularly those inquiring about discipline-related interactions as well as other difficult interactions). The responses to these questionnaires will be used to explore the relationships among these variables. In particular, we are expecting that parents who report difficult temperament characteristics, difficulties regulating their emotions and behaviors, high levels of stress, poor coping, and previous adverse experiences will be more likely to exhibit harsher parenting practices. In addition, we are expecting that easier temperament characteristics and the ability to regulate emotions and behaviors may provide a buffer against the long-term effects of difficult childhood experiences on later parenting behaviors and emotional and behavioral functioning. If so, these relationships may serve as a point of intervention for at-risk parents.

If you would like more information about temperament, emotional and behavioral regulation, stress, coping, parenting, and emotional and behavioral functioning, please refer to the following sources:

Casanueva, C., Goldman-Fraser, J., Ringeisen, H., Lederman, C., Katz, L., & Osofsky, J. D. (2010). Maternal perceptions of temperament among infants and toddlers investigated for maltreatment: Implications for services need and referral. *Journal of Family Violence, 25*(6), 557-574. doi:10.1007/s10896-010-9316-6

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348-362. doi:10.1037/0022-3514.85.2.348

Mäntymaa, M., Puura, K., Luoma, I., Salmelin, R. K., & Tamminen, T. (2006). Mother's early perception of her infant's difficult temperament, parenting stress and early mother-infant interaction. *Nordic Journal of Psychiatry, 60*(5), 379-386. doi:10.1080/08039480600937280

If you have any further questions about this research study, please contact Kimberly Renk, Ph.D., by phone (407-823-2218) or e-mail (Kimberly.Renk@ucf.edu). If you feel that you would benefit from talking with a counselor about your own childhood experiences, please contact the UCF Psychology Clinic at 407-823-4348.

APPENDIX C: DEMOGRAPHICS QUESTIONNAIRE

Appendix C: Demographics Questionnaire

1. **Your Gender:** M F

2. **Your Age:** _____

3. **Your Ethnicity:** Caucasian Hispanic African-American

   Asian-American Native-American Other_____

4. **What, if any, is your religious affiliation?** _____

   On a scale of 1-10 (1 = not strong at all; 10 = very strong) how strong of a religious affiliation would you say you have? _____

5. **Your Marital Status:** Married Divorced Separated Widowed Single

   Living with Partner Remarried (If so, how many previous marriages_____)

6. **Does your child's other parent live with you?** Yes No

7. **Please list the age and gender of your child(ren) and whether or not they live with you.**

Age	**Gender**	**Live with you?**	**Born at how many weeks gestation?**
____	M F	Y N	____
____	M F	Y N	____
____	M F	Y N	____
____	M F	Y N	____

8. **Do you live with any extended family members or friends?** Y N

9. **If yes, who?** _____

10. **Your level of education:**

Post Doctorate	Vocational Training
Graduate Professional Training	High School Diploma
College Degree (bachelors)	Some High School
Some College	Less than High School

11. **Your occupation:** _____

12. Child's other parent's level of education:

Post Doctorate	Vocational Training
Graduate Professional Training	High School Diploma
College Degree (bachelors)	Some High School
Some College	Less than High School

13. Your child's other parent's occupation: _____

14. Estimated Yearly household income (please circle one):

Less than $10,000	$40,000 - $50,000
$10,000 - $20,000	$50,000 - $60,000
$20,000 - $30,000	$60,000 - $70,000
$30,000 - $40,000	More than $70,000

15. Estimated debt (please circle one):

Less than $10,000	$40,000 - $50,000
$10,000 - $20,000	$50,000 - $60,000
$20,000 - $30,000	$60,000 - $70,000
$30,000 - $40,000	More than $70,000

APPENDIX D: DIMENSIONS OF TEMPERAMENT SCALE-REVISED FOR ADULTS (DOTS-R ADULT)

Appendix D: Dimensions Of Temperament Scale-Revised For Adults (DOTS-R Adult)

HOW TO ANSWER: On the following pages are some statements about how people like you may behave. Some of the statements may be true of your own behavior and others may not apply to you. For each statement we would like you to indicate if the statement is usually true of you, is more true than false of you, is more false than true of you, or is usually false of you. There are no "right" or "wrong" answers because all people behave in different ways. All you have to do is answer what is true for you.

On the line to the left of each statement select 0 if the statement is usually false for you, write a 1 if the statement is more false than true for you, write a 2 if the statement is more true than false for you, or write a 3 if the statement is usually true for you.

1. ___ It takes me a long time to get used to a new thing in the home.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

2. ___ I can't stay still for long.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

3. ___ I laugh and smile at a lot of things.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

4. ___ I wake up at different times.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

5. ___ Once I am involved in a task, nothing can distract me from it.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

6. ___ I persist at a task until it's finished.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

7. ___ I move around a lot.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

8. ___ I can make myself at home anywhere.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

9. ___ I can always be distracted by something else, no matter what I may be doing.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

10. ___ I stay with an activity for a long time.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

11. ___ If I have to stay in one place for a long time, I get very restless.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

12. ___ I usually move towards new objects shown to me.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

13. ___ It takes me a long time to adjust to new schedules.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

14. ___ I do not laugh or smile at many things.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

15. ___ If I am doing one thing, something else occurring won't get me to stop.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

16. ___ I eat about the same amount for dinner whether I am home, visiting someone, or traveling.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

17. ___ My first reaction is to reject something new or unfamiliar to me.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

18. ___ Changes in plans make me restless.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

19. ___ I often stay still for long periods of time.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

20. ___ Things going on around me can not take me away from what I am doing.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

21. ___ I take a nap, rest, or break at the same time every day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

22. ___ Once I take something up, I stay with it.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

23. ___ Even when I am supposed to be still, I get very fidgety after a few minutes.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

24. ___ I am hard to distract.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

25. ___ I usually get the same amount of sleep each night.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

26. ___ On meeting a new person I tend to move towards him or her.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

27. ___ I get hungry about the same time each day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

28. ___ I smile often.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

29. ___ I never seem to stop moving.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

30. ___ It takes me no time at all to get used to new people.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

31. ___ I usually eat the same amount each day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

32. ___ I move a great deal in my sleep.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

33. ___ I seem to get sleepy just about the same time every night.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

34. ___ I do not find that I laugh often.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

35. ___ I move towards new situations.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

36. ___ When I am away from home, I still wake up at the same time each morning.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

37. ___ I eat about the same amount at breakfast from day to day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

38. ___ I move a lot in bed.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

39. ___ I feel full of pep and energy at the same time each day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

40. ___ I have bowel movements at about the same time each day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

41. ___ No matter when I go to sleep, I wake up at the same time the next morning.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

42. ___ In the morning, I am still in the same place as I was when I fell asleep.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

43. ___ I eat about the same amount at supper from day to day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

44. ___ When things are out of place, it takes me a long time to get used to it.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

45. ___ I wake up at the same time on weekends and holidays as on other days of the week.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

46. ___ I don't move around much at all in my sleep.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

47. ___ My appetite seems to stay the same day after day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

48. ___ My mood is generally cheerful.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

49. ___ I resist changes in routine.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

50. ___ I laugh several times a day.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

51. ___ My first response to anything new is to move my head toward it.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

52. ___ Generally, I am happy.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

53. ___ The number of times I have a bowel movement on any day varies from day to day.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

54. ___ I never seem to be in the same place for long.
0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

APPENDIX E: EMOTION REGULATION QUESTIONNAIRE (ERQ)

Appendix E: Emotion Regulation Questionnaire (ERQ)

Emotion Regulation Questionnaire (ERQ)
Gross & John
9/03

The Emotion Regulation Questionnaire is designed to assess individual differences in the habitual use of two emotion regulation strategies: cognitive reappraisal and expressive suppression.

Citation

Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. Journal of Personality and Social Psychology, 85, 348-362.

Instructions and Items

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

1	2	3	4	5	6	7
strongly disagree			**neutral**			**strongly agree**

1. ____ When I want to feel more *positive* emotion (such as joy or amusement), I *change what I'm thinking about*.
2. ____ I keep my emotions to myself.
3. ____ When I want to feel less *negative* emotion (such as sadness or anger), I *change what I'm thinking about*.
4. ____ When I am feeling *positive* emotions, I am careful not to express them.
5. ____ When I'm faced with a stressful situation, I make myself *think about it* in a way that helps me stay calm.
6. ____ I control my emotions by *not expressing them*.
7. ____ When I want to feel more *positive* emotion, I *change the way I'm thinking* about the situation.
8. ____ I control my emotions by *changing the way I think* about the situation I'm in.
9. ____ When I am feeling *negative* emotions, I make sure not to express them.
10. ____ When I want to feel less *negative* emotion, I *change the way I'm thinking* about the situation.

APPENDIX F: DIFFICULTIES IN EMOTION REGULATION SCALE (DERS)

Appendix F: Difficulties In Emotion Regulation Scale (DERS)

1	2	3	4	5
Almost never (0-10%)	Sometimes (11-35%)	About half the time (36-65%)	Most of the time (66-90%)	Almost always (91-100%)

Difficulties in Emotion Regulation Scale (DERS)

Identifier Date

Please indicate how often the following 36 statements apply to you by writing the appropriate number from the scale above (1 – 5) in the box alongside each item.

1	I am clear about my feelings (R)	☐
2	I pay attention to how I feel (R)	☐
3	I experience my emotions as overwhelming and out of control	☐
4	I have no idea how I am feeling	☐
5	I have difficulty making sense out of my feelings	☐
6	I am attentive to my feelings (R)	☐
7	I know exactly how I am feeling (R)	☐
8	I care about what I am feeling (R)	☐
9	I am confused about how I feel	☐
10	When I'm upset, I acknowledge my emotions (R)	☐
11	When I'm upset, I become angry with myself for feeling that way	☐
12	When I'm upset, I become embarrassed for feeling that way	☐

1	2	3	4	5
Almost never (0-10%)	Sometimes (11-35%)	About half the time (36-65%)	Most of the time (66-90%)	Almost always (91-100%)

28	When I'm upset, I believe that there is nothing I can do to make myself feel better	☐
29	When I'm upset, I become irritated with myself for feeling that way	☐
30	When I'm upset, I start to feel very bad about myself	☐
31	When I'm upset, I believe that wallowing in it is all I can do	☐
32	When I'm upset, I lose control over my behaviours	☐
33	When I'm upset, I have difficulty thinking about anything else	☐
34	When I'm upset, I take time to figure out what I'm really feeling (R)	☐
35	When I'm upset, it takes me a long time to feel better	☐
36	When I'm upset, my emotions feel overwhelming	☐

APPENDIX G: PARENTING STRESS INDEX- FOURTH EDITION- SHORT FORM

(PSI-4-SF)

Appendix G: Parenting Stress Index- Fourth Edition- Short Form (PSI-4-SF)

PSI Short Form

Instructions

This questionnaire contains 36 statements. Read each statement carefully. For each statement, please focus on the child you are most concerned about, and circle the response that best represents your opinion.

Circle the SA if you strongly agree with the statement.

Circle the A if you agree with the statement.

Circle the NS if you are not sure.

Circle the D if you disagree with the statement.

Circle the SD if you strongly disagree with the statement.

For example, if you sometimes enjoy going to the movies, you would circle A in response to the following statement:

I enjoy going to the movies. SA (A) NS D SD

While you may not find a response that exactly states your feelings, please circle the response that comes closest to describing how you feel. YOUR FIRST REACTION TO EACH QUESTION SHOULD BE YOUR ANSWER.

Circle only one response for each statement, and respond to all statements. **DO NOT ERASE!** If you need to change an answer, make an "X" through the incorrect answer and circle the correct response. For example:

I enjoy going to the movies. SA A NS (X) (SD)

Before responding to the statements, write your name, gender, date of birth, ethnic group, marital status, child's name, child's gender, child's date of birth, and today's date in the spaces at the top of the questionnaire.

Name _____ Gender ____ Date of birth_____ Ethnic group _____ Marital status _____

Child's name_____ Child's gender _____ Child's date of birth _____ Today's date _____

SA = Strongly Agree	A = Agree	NS = Not Sure	D = Disagree	SD = Strongly Disagree

1.	I often have the feeling that I cannot handle things very well.	SA	A	NS	D	SD
2.	I find myself giving up more of my life to meet my children's needs than I ever expected.	SA	A	NS	D	SD
3.	I feel trapped by my responsibilities as a parent.	SA	A	NS	D	SD
4.	Since having this child, I have been unable to do new and different things.	SA	A	NS	D	SD
5.	Since having a child, I feel that I am almost never able to do things that I like to do.	SA	A	NS	D	SD
6.	I am unhappy with the last purchase of clothing I made for myself.	SA	A	NS	D	SD
7.	There are quite a few things that bother me about my life.	SA	A	NS	D	SD
8.	Having a child has caused more problems than I expected in my relationship with my spouse (or male/female friend).	SA	A	NS	D	SD
9.	I feel alone and without friends.	SA	A	NS	D	SD
10.	When I go to a party, I usually expect not to enjoy myself.	SA	A	NS	D	SD
11.	I am not as interested in people as I used to be.	SA	A	NS	D	SD
12.	I don't enjoy things as I used to.	SA	A	NS	D	SD
13.	My child rarely does things for me that make me feel good.	SA	A	NS	D	SD
14.	Sometimes I feel my child doesn't like me and doesn't want to be close to me.	SA	A	NS	D	SD
15.	My child smiles at me much less than I expected.	SA	A	NS	D	SD
16.	When I do things for my child, I get the feeling that my efforts are not appreciated very much.	SA	A	NS	D	SD
17.	When playing, my child doesn't often giggle or laugh.	SA	A	NS	D	SD
18.	My child doesn't seem to learn as quickly as most children.	SA	A	NS	D	SD
19.	My child doesn't seem to smile as much as most children.	SA	A	NS	D	SD
20.	My child is not able to do as much as I expected.	SA	A	NS	D	SD
21.	It takes a long time and it is very hard for my child to get used to new things.	SA	A	NS	D	SD

For the next statement, choose your response from the choices "1" to "5" below.

22.	I feel that I am: 1. not very good at being a parent 2. a person who has some trouble being a parent 3. an average parent 4. a better than average parent 5. a very good parent	1	2	3	4	5
23.	I expected to have closer and warmer feelings for my child than I do and this bothers me.	SA	A	NS	D	SD
24.	Sometimes my child does things that bother me just to be mean.	SA	A	NS	D	SD
25.	My child seems to cry or fuss more often than most children.	SA	A	NS	D	SD
26.	My child generally wakes up in a bad mood.	SA	A	NS	D	SD
27.	I feel that my child is very moody and easily upset.	SA	A	NS	D	SD
28.	My child does a few things which bother me a great deal.	SA	A	NS	D	SD
29.	My child reacts very strongly when something happens that my child doesn't like.	SA	A	NS	D	SD
30.	My child gets upset easily over the smallest thing.	SA	A	NS	D	SD
31.	My child's sleeping or eating schedule was much harder to establish than I expected.	SA	A	NS	D	SD

For the next statement, choose your response from the choices "1" to "5" below.

32.	I have found that getting my child to do something or stop doing something is: 1. much harder than I expected 2. somewhat harder than I expected 3. about as hard as I expected 4. somewhat easier than I expected 5. much easier than I expected	1	2	3	4	5

For the next statement, choose your response from the choices "10+" to "1-3."

33.	Think carefully and count the number of things which your child does that bother you. For example: dawdles, refuses to listen, overactive, cries, interrupts, fights, whines, etc.	10+	8-9	6-7	4-5	1-3
34.	There are some things my child does that really bother me a lot.	SA	A	NS	D	SD
35.	My child turned out to be more of a problem than I had expected.	SA	A	NS	D	SD
36.	My child makes more demands on me than most children.	SA	A	NS	D	SD

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APPENDIX H: HASSLES SCALE (HS)

Appendix H: Hassles Scale (HS)

THE HASSLES SCALE

Directions: Hassles are irritants that can range from minor annoyances to fairly major pressures, problems, or difficulties. They can occur few or many times.

Listed in the center of the following pages are a number of ways in which a person can feel hassled. First, circle the hassles that have happened to you in the past month. Then look at the numbers on the right of the items you circled. Indicate by circling a 1, 2, or 3 how SEVERE each of the circled hassles has been for you in the past month. If a hassle did not occur in the last month do NOT circle it.

HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
(1) Misplacing or losing things	1	2	3
(2) Troublesome neighbors	1	2	3
(3) Social obligations	1	2	3
(4) Inconsiderate smokers	1	2	3
(5) Troubling thoughts about your future	1	2	3
(6) Thoughts about death	1	2	3
(7) Health of a family member	1	2	3
(8) Not enough money for clothing	1	2	3
(9) Not enough money for housing	1	2	3
(10) Concerns about owing money	1	2	3
(11) Concerns about getting credit	1	2	3
(12) Concerns about money for emergencies	1	2	3

HASSLES SCALE

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
(36)	Not enough money for food	1	2	3
(37)	Too many interruptions	1	2	3
(38)	Unexpected company	1	2	3
(39)	Too much time on hands	1	2	3
(40)	Having to wait	1	2	3
(41)	Concerns about accidents	1	2	3
(42)	Being lonely	1	2	3
(43)	Not enough money for health care	1	2	3
(44)	Fear of confrontation	1	2	3
(45)	Financial security	1	2	3
(46)	Silly practical mistakes	1	2	3
(47)	Inability to express yourself	1	2	3
(48)	Physical illness	1	2	3
(49)	Side effects of medication	1	2	3
(50)	Concerns about medical treatment	1	2	3
(51)	Physical appearance	1	2	3
(52)	Fear of rejection	1	2	3
(53)	Difficulties with getting pregnant	1	2	3
(54)	Sexual problems that result from physical problems	1	2	3
(55)	Sexual problems other than those resulting from physical problems	1	2	3
(56)	Concerns about health in general	1	2	3

HASSLES SCALE

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
(57)	Not seeing enough people	1	2	3
(58)	Friends or relatives too far away	1	2	3
(59)	Preparing meals	1	2	3
(60)	Wasting time	1	2	3
(61)	Auto maintenance	1	2	3
(62)	Filling out forms	1	2	3
(63)	Neighborhood deterioration	1	2	3
(64)	Financing children's education	1	2	3
(65)	Problems with employees	1	2	3
(66)	Problems on job due to being a woman or man	1	2	3
(67)	Declining physical abilities	1	2	3
(68)	Being exploited	1	2	3
(69)	Concerns about bodily functions	1	2	3
(70)	Rising prices of common goods	1	2	3
(71)	Not getting enough rest	1	2	3
(72)	Not getting enough sleep	1	2	3
(73)	Problems with aging parents	1	2	3
(74)	Problems with your children	1	2	3
(75)	Problems with persons younger than yourself	1	2	3
(76)	Problems with your lover	1	2	3
(77)	Difficulties seeing or hearing	1	2	3
(78)	Overloaded with family responsibilities	1	2	3
(79)	Too many things to do	1	2	3

HASSLES SCALE

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
(80)	Unchallenging work	1	2	3
(81)	Concerns about meeting high standards	1	2	3
(82)	Financial dealings with friends or acquaintances	1	2	3
(83)	Job dissatisfactions	1	2	3
(84)	Worries about decisions to change jobs	1	2	3
(85)	Trouble with reading, writing, or spelling abilities	1	2	3
(86)	Too many meetings	1	2	3
(87)	Problems with divorce or separation	1	2	3
(88)	Trouble with arithmetic skills	1	2	3
(89)	Gossip	1	2	3
(90)	Legal problems	1	2	3
(91)	Concerns about weight	1	2	3
(92)	Not enough time to do the things you need to do	1	2	3
(93)	Television	1	2	3
(94)	Not enough personal energy	1	2	3
(95)	Concerns about inner conflicts	1	2	3
(96)	Feel conflicted over what to do	1	2	3
(97)	Regrets over past decisions	1	2	3
(98)	Menstrual (period) problems	1	2	3
(99)	The weather	1	2	3
(100)	Nightmares	1	2	3
(101)	Concerns about getting ahead	1	2	3

HASSLES SCALE

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
(102)	Hassles from boss or supervisor	1	2	3
(103)	Difficulties with friends	1	2	3
(104)	Not enough time for family	1	2	3
(105)	Transportation problems	1	2	3
(106)	Not enough money for transportation	1	2	3
(107)	Not enough money for entertainment and recreation	1	2	3
(108)	Shopping	1	2	3
(109)	Prejudice and discrimination from others	1	2	3
(110)	Property, investments or taxes	1	2	3
(111)	Not enough time for entertainment and recreation	1	2	3
(112)	Yardwork or outside home maintenance	1	2	3
(113)	Concerns about news events	1	2	3
(114)	Noise	1	2	3
(115)	Crime	1	2	3
(116)	Traffic	1	2	3
(117)	Pollution	1	2	3
	HAVE WE MISSED ANY OF YOUR HASSLES? IF SO, WRITE THEM IN BELOW:			
(118)	_____	1	2	3

ONE MORE THING: HAS THERE BEEN A CHANGE IN YOUR LIFE THAT AFFECTED HOW YOU ANSWERED THIS SCALE? IF SO, TELL US WHAT IT WAS:

_____

APPENDIX I: WAYS OF COPING QUESTIONNAIRE (WOC)

Appendix I: Ways Of Coping Questionnaire (WOC)

WAYS OF COPING (Revised)

Please read each item below and indicate, by using the following rating scale, to what extent you used it in the situation you have just described.

Not Used	Used Somewhat	Used Quite A Bit	Used A great deal
0	1	2	3

_____ 1. Just concentrated on what I had to do next – the next step.

_____ 2. I tried to analyze the problem in order to understand it better.

_____ 3. Turned to work or substitute activity to take my mind off things.

_____ 4. I felt that time would make a difference – the only thing to do was to wait.

_____ 5. Bargained or compromised to get something positive from the situation.

_____ 6. I did something which I didn't think would work, but at least I was doing something.

_____ 7. Tried to get the person responsible to change his or her mind.

_____ 8. Talked to someone to find out more about the situation.

_____ 9. Criticized or lectured myself.

_____ 10. Tried not to burn my bridges, but leave things open somewhat.

_____ 11. Hoped a miracle would happen.

_____ 12. Went along with fate; sometimes I just have bad luck.

_____ 13. Went on as if nothing had happened.

_____ 14. I tried to keep my feelings to myself.

_____ 15. Looked for the silver lining, so to speak; tried to look on the bright side of things.

_____ 16. Slept more than usual.

_____ 17. I expressed anger to the person(s) who caused the problem.

_____ 18. Accepted sympathy and understanding from someone.

Not Used	Used Somewhat	Used Quite A Bit	Used A great deal
0	1	2	3

_____ 19. I told myself things that helped me to feel better.

_____ 20. I was inspired to do something creative.

_____ 21. Tried to forget the whole thing.

_____ 22. I got professional help.

_____ 23. Changed or grew as a person in a good way.

_____ 24. I waited to see what would happen before doing anything.

_____ 25. I apologized or did something to make up.

_____ 26. I made a plan of action and followed it.

_____ 27. I accepted the next best thing to what I wanted.

_____ 28. I let my feelings out somehow.

_____ 29. Realized I brought the problem on myself.

_____ 30. I came out of the experience better than when I went in.

_____ 31. Talked to someone who could do something concrete about the problem.

_____ 32. Got away from it for a while; tried to rest or take a vacation.

_____ 33. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.

_____ 34. Took a big chance or did something very risky.

_____ 35. I tried not to act too hastily or follow my first hunch.

_____ 36. Found new faith.

_____ 37. Maintained my pride and kept a stiff upper lip.

_____ 38. Rediscovered what is important in life.

Not Used	Used Somewhat	Used Quite A Bit	Used A great deal
0	1	2	3

_____ 39. Changed something so things would turn out all right.

_____ 40. Avoided being with people in general.

_____ 41. Didn't let it get to me; refused to think too much about it.

_____ 42. I asked a relative or friend I respected for advice.

_____ 43. Kept others from knowing how bad things were.

_____ 44. Made light of the situation; refused to get too serious about it.

_____ 45. Talked to someone about how I was feeling.

_____ 46. Stood my ground and fought for what I wanted.

_____ 47. Took it out on other people.

_____ 48. Drew on my past experiences; I was in a similar situation before.

_____ 49. I knew what had to be done, so I doubled my efforts to make things work.

_____ 50. Refused to believe that it had happened.

_____ 51. I made a promise to myself that things would be different next time.

_____ 52. Came up with a couple of different solutions to the problem.

_____ 53. Accepted it, since nothing could be done.

_____ 54. I tried to keep my feelings from interfering with other things too much.

_____ 55. Wished that I could change what had happened or how I felt.

_____ 56. I changed something about myself.

_____ 57. I daydreamed or imagined a better time or place than the one I was in.

_____ 58. Wished that the situation would go away or somehow be over with.

_____ 59. Had fantasies or wishes about how things might turn out.

Not Used	Used Somewhat	Used Quite A Bit	Used A great deal
0	1	2	3

_____ 60. I prayed.

_____ 61. I prepared myself for the worst.

_____ 62. I went over in my mind what I would say or do.

_____ 63. I thought about how a person I admire would handle this situation and used that as a model.

_____ 64. I tried to see things from the other person's point of view.

_____ 65. I reminded myself how much worse things could be.

_____ 66. I jogged or exercised.

APPENDIX J: DIMENSIONS OF TEMPERAMENT- REVISED FOR CHILDREN (DOTS-R CHILD)

Appendix J: Dimensions Of Temperament- Revised For Children (Dots-R Child)

HOW TO ANSWER: On the following pages are some statements about how children like your own may behave. Some of the statements may be true of your child's behavior, and others may not apply to him or her. For each statement, we would like you to indicate if the statement is usually true of your child, is more true than false of your child, is more false than true of your child, or is usually false of your child. There are no "right" or "wrong" answers because all children behave in different ways. All you have to do is answer what is true or false for your child as well as how important this behavior is to you.

For each statement, select 0 if the statement is usually false of your child, 1 if the statement is more false than true of your child, 2 if the statement is more true than false of your child, or 3 if the statement is usually true of your child.

Next, rate how important each behavior is to you. Select 0 if it is a behavior that it not important to you at all, 1 if it is a behavior that is somewhat important to you, or 2 if it is a behavior that is very important to you.

1. __ __ It takes my child a long time to get used to a new thing in the home.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

2. __ __ My child can't stay still for long.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

3. __ __ My child laughs and smiles at a lot of things.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

4. __ __ My child wakes up at different times.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

5. __ __ Once my child is involved in a task, nothing can distract him or her from it.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

6. __ __ My child persists at a task until it's finished.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

7. __ __ My child moves around a lot.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

8. __ __ My child can make him/herself at home anywhere.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

9. __ __ My child can always be distracted by something else, no matter what he or she may be doing.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

10. __ __ My child stays with an activity for a long time.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

11. __ __ If my child has to stay in one place for a long time, he/she gets very restless.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

12. __ __ My child usually moves toward new objects shown to him/her.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

13. __ __ It takes my child a long time to adjust to new schedules.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

14. __ __ My child does not laugh or smile at many things.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

15. __ __ If my child is doing one thing, something else occurring won't get him/her to stop.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

16. __ __ My child eats about the same amount for dinner whether he/she is home, visiting someone, or traveling.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

17. __ __ My child's first reaction is to reject something new or unfamiliar to him/her.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

18. __ __ Changes in plans make my child restless.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

19. __ __ My child often stays still for long periods of time.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

20. __ __ Things going on around my child can <u>not</u> take him/her away from what he/she is doing.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

21. __ __ My child takes a nap, rest, or break at the same time every day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

22. __ __ Once my child takes something up, he/she stays with it.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

23. __ __ Even when my child is supposed to be still, he/she gets very fidgety after a few minutes.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

24. __ __ My child is hard to distract.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

25. __ __ My child usually gets the same amount of sleep each night.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

26. __ __ On meeting a new person my child tends to move toward him or her.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

27. __ __ My child gets hungry about the same time each day.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

28. __ __ My child smiles often.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

29. __ __ My child never seems to stop moving.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

30. __ __ It takes my child no time at all to get used to new people.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

31. __ __ My child usually eats the same amount each day.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

32. __ __ My child moves a great deal in his/her sleep.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

33. __ __ My child seems to get sleepy just about the same time every night.

0 = usually FALSE
1 = more FALSE than true
2 = more TRUE than false
3 = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

34. __ __ I do not find my child laughing often.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

35. __ __ My child moves toward new situations.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

36. __ __ When My child is away from home he/she still wakes up at the same time each morning.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

37. __ __ My child eats about the same amount at breakfast from day to day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

38. __ __ My child moves a lot in bed.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

39. __ __ My child feels full of pep and energy at the same time each day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

40. __ __ My child has bowel movements at about the same time each day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

41. __ __ No matter when my child goes to sleep, he/she wakes up at the same time the next morning.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

42. __ __ In the morning, my child is still in the same place as he/she was when he/she fell asleep.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

43. __ __ My child eats about the same amount at supper from day to day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

44. __ __ When things are out of place, it takes my child a long time to get used to it.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

45. __ __ My child wakes up at the same time on weekends and holidays as on other days of the week.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

46. __ __ My child doesn't move around much at all in his/her sleep.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

47. __ __ My child's appetite seems to stay the same day after day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

48. __ __ My child's mood is generally cheerful.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

49. __ __ My child resists changes in routine.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

50. __ __ My child laughs several times a day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

51. __ __ My child's first response to anything new is to move his or her head toward it.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

52. __ __ Generally, my child is happy.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

53. __ __ The number of times my child has a bowel movement on any day varies from day to day.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

54. __ __ My child never seems to be in the same place for long.

0 = usually FALSE	0 = NOT important
1 = more FALSE than true	1 = SOMETIMES important
2 = more TRUE than false	2 = VERY important
3 = usually TRUE	

APPENDIX K: CHILD ABUSE POTENTIAL INVENTORY (CAP)

Appendix K: Child Abuse Potential Inventory (CAP)

CAP INVENTORY FORM VI

Name: _____ Date: _____ ID#: _____

Age: _____ Gender: Male _____ Female _____ Marital Status: Sin___ Mar___ Sep___ Div___ Wid___

Race: Black ___ White ___ Hispanic ___ Am. Indian ___ Number of children in home _____

Other (specify) _____ Highest grade completed _____

INSTRUCTIONS: The following questionnaire includes a series of statements which may be applied to yourself. Read each of the statements and determine if you **AGREE** or **DISAGREE** with the statement. If you agree with a statement, circle **A** for agree. If you disagree with a statement, circle **DA** for disagree. Be honest when giving your answers. Remember to read each statement; it is important not to skip any statement.

●OOO

1.	I never feel sorry for others	A	DA
2.	I enjoy having pets	A	DA
3.	I have always been strong and healthy	A	DA
4.	I like most people	A	DA
5.	I am a confused person	A	DA
6.	I do not trust most people	A	DA
7.	People expect too much from me	A	DA
8.	Children should never be bad	A	DA
9.	I am often mixed up	A	DA
10.	Spanking that only bruises a child is okay	A	DA
11.	I always try to check on my child when it's crying	A	DA
12.	I sometimes act without thinking	A	DA
13.	You cannot depend on others	A	DA
14.	I am a happy person	A	DA
15.	I like to do things with my family	A	DA
16.	Teenage girls need to be protected	A	DA
17.	I am often angry inside	A	DA
18.	Sometimes I feel all alone in the world	A	DA
19.	Everything in a home should always be in its place	A	DA
20.	I sometimes worry that I cannot meet the needs of a child	A	DA
21.	Knives are dangerous for children	A	DA
22.	I often feel rejected	A	DA
23.	I am often lonely inside	A	DA
24.	Little boys should never learn sissy games	A	DA
25.	I often feel very frustrated	A	DA

●OOO

26.	Children should never disobey	A	DA
27.	I love all children	A	DA
28.	Sometimes I fear that I will lose control of myself	A	DA
29.	I sometimes wish that my father would have loved me more	A	DA
30.	I have a child who is clumsy	A	DA
31.	I know what is the right and wrong way to act	A	DA
32.	My telephone number is unlisted	A	DA
33.	The birth of a child will usually cause problems in a marriage	A	DA
34.	I am always a good person	A	DA
35.	I never worry about my health	A	DA
36.	I sometimes worry that I will not have enough to eat	A	DA
37.	I have never wanted to hurt someone else	A	DA
38.	I am an unlucky person	A	DA
39.	I am usually a quiet person	A	DA
40.	Children are pests	A	DA
41.	Things have usually gone against me in life	A	DA
42.	Picking up a baby whenever he cries spoils him	A	DA
43.	I sometimes am very quiet	A	DA
44.	I sometimes lose my temper	A	DA
45.	I have a child who is bad	A	DA
46.	I sometimes think of myself first	A	DA
47.	I sometimes feel worthless	A	DA
48.	My parents did not really care about me	A	DA
49.	I am sometimes very sad	A	DA
50.	Children are really little adults	A	DA
51.	I have a child who breaks things	A	DA
52.	I often feel worried	A	DA
53.	It is okay to let a child stay in dirty diapers for a while	A	DA
54.	A child should never talk back	A	DA
55.	Sometimes my behavior is childish	A	DA
56.	I am often easily upset	A	DA
57.	Sometimes I have bad thoughts	A	DA
58.	Everyone must think of himself first	A	DA
59.	A crying child will never be happy	A	DA
60.	I have never hated another person	A	DA
61.	Children should not learn how to swim	A	DA
62.	I always do what is right	A	DA
63.	I am often worried inside	A	DA
64.	I have a child who is sick a lot	A	DA
65.	Sometimes I do not like the way I act	A	DA
66.	I sometimes fail to keep all of my promises	A	DA
67.	People have caused me a lot of pain	A	DA
68.	Children should stay clean	A	DA
69.	I have a child who gets into trouble a lot	A	DA
70.	I never get mad at others	A	DA

OO●O

71.	I always get along with others	A	DA
72.	I often think about what I have to do	A	DA
73.	I find it hard to relax	A	DA
74.	These days a person doesn't really know on whom one can count	A	DA
75.	My life is happy	A	DA
76.	I have a physical handicap	A	DA
77.	Children should have play clothes and good clothes	A	DA
78.	Other people do not understand how I feel	A	DA
79.	A five year old who wets his bed is bad	A	DA
80.	Children should be quiet and listen	A	DA
81.	I have several close friends in my neighborhood	A	DA
82.	The school is primarily responsible for educating the child	A	DA
83.	My family fights a lot	A	DA
84.	I have headaches	A	DA
85.	As a child I was abused	A	DA
86.	Spanking is the best punishment	A	DA
87.	I do not like to be touched by others	A	DA
88.	People who ask for help are weak	A	DA
89.	Children should be washed before bed	A	DA
90.	I do not laugh very much	A	DA
91.	I have several close friends	A	DA
92.	People should take care of their own needs	A	DA
93.	I have fears no one knows about	A	DA
94.	My family has problems getting along	A	DA
95.	Life often seems useless to me	A	DA
96.	A child should be potty trained by the time he's one year old	A	DA
97.	A child in a mud puddle is a happy sight	A	DA
98.	People do not understand me	A	DA
99.	I often feel worthless	A	DA
100.	Other people have made my life unhappy	A	DA
101.	I am always a kind person	A	DA
102.	Sometimes I do not know why I act as I do	A	DA
103.	I have many personal problems	A	DA
104.	I have a child who often hurts himself	A	DA
105.	I often feel very upset	A	DA
106.	People sometimes take advantage of me	A	DA
107.	My life is good	A	DA
108.	A home should be spotless	A	DA
109.	I am easily upset by my problems	A	DA
110.	I never listen to gossip	A	DA
111.	My parents did not understand me	A	DA
112.	Many things in life make me angry	A	DA
113.	My child has special problems	A	DA
114.	I do not like most children	A	DA
115.	Children should be seen and not heard	A	DA

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116.	Most children are alike	A	DA
117.	It is important for children to read	A	DA
118.	I am often depressed	A	DA
119.	Children should occasionally be thoughtful of their parents	A	DA
120.	I am often upset	A	DA
121.	People don't get along with me	A	DA
122.	A good child keeps his toys and clothes neat and orderly	A	DA
123.	Children should always make their parents happy	A	DA
124.	It is natural for a child to sometimes talk back	A	DA
125.	I am never unfair to others	A	DA
126.	Occasionally, I enjoy not having to take care of my child	A	DA
127.	Children should always be neat	A	DA
128.	I have a child who is slow	A	DA
129.	A parent must use punishment if he wants to control a child's behavior	A	DA
130.	Children should never cause trouble	A	DA
131.	I usually punish my child when it is crying	A	DA
132.	A child needs very strict rules	A	DA
133.	Children should never go against their parents' orders	A	DA
134.	I often feel better than others	A	DA
135.	Children sometimes get on my nerves	A	DA
136.	As a child I was often afraid	A	DA
137.	Children should always be quiet and polite	A	DA
138.	I am often upset and do not know why	A	DA
139.	My daily work upsets me	A	DA
140.	I sometimes fear that my children will not love me	A	DA
141.	I have a good sex life	A	DA
142.	I have read articles and books on child rearing	A	DA
143.	I often feel very alone	A	DA
144.	People should not show anger	A	DA
145.	I often feel alone	A	DA
146.	I sometimes say bad words	A	DA
147.	Right now, I am deeply in love	A	DA
148.	My family has many problems	A	DA
149.	I never do anything that is bad for my health	A	DA
150.	I am always happy with what I have	A	DA
151.	Other people have made my life hard	A	DA
152.	I laugh some almost every day	A	DA
153.	I sometimes worry that my needs will not be met	A	DA
154.	I often feel afraid	A	DA
155.	I sometimes act silly	A	DA
156.	A person should keep his business to himself	A	DA
157.	I never raise my voice in anger	A	DA
158.	As a child I was knocked around by my parents	A	DA
159.	I sometimes think of myself before others	A	DA
160.	I always tell the truth	A	DA

APPENDIX L: IRB APPROVAL LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Kimberly D. Renk** and Co-PI: **Amanda Lowell**

Date: **May 09, 2014**

Dear Researcher:

On 5/9/2014, the IRB approved the following minor modifications to human participant research that is exempt from regulation:

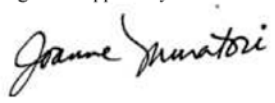
Type of Review:	Exempt Determination
Modification Type:	An additional recruitment method will be used: Individuals recruited through Amazon Mechanical Turk will receive a $2.00 Amazon credit compensation. An updated protocol has been uploaded in iRIS and a revised consent document has been approved for use. In addition, a preschool flyer has been uploaded along with a facility approval form.
Project Title:	A Closer Look at the Interactions Among Parent and Child Temperament, Stress and Coping, Emotional and Behavioral Regulation, and Parenting Behaviors
Investigator:	Kimberly D Renk
IRB Number:	SBE-13-09617
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 05/09/2014 03:25:55 PM EDT



IRB Coordinator

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